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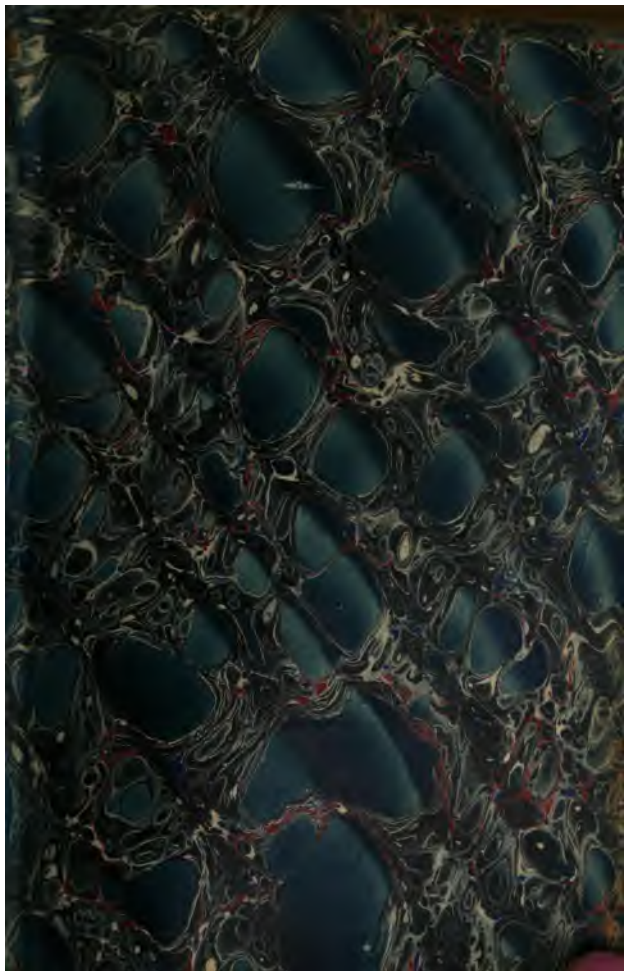
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2nd. ed. June 1849
MANUAL

OF

FLOWER GARDENING

FOR LADIES:

WITH

DIRECTIONS FOR THE PROPAGATION AND MANAGEMENT
OF THE PLANTS USUALLY CULTIVATED
IN THE FLOWER GARDEN.

BY

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CORRESPONDING MEMBER OF THE HORTICULTURAL SOCIETY.

LONDON:

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want of the necessary practical knowledge has, no doubt, deterred many ladies from taking that interest in the management of their own flower-garden which is essential to the perfect enjoyment of it; and, to supply that want, is the object of the present little initiatory treatise. As it may fall into the hands of some who are totally ignorant of Gardening, we shall first give a short explanation of the principal manipulations, sufficient merely to convey a correct idea of the meaning of the terms; for no written explanation can impart the instruction that a few practical lessons will teach the beginner.

MANUAL OF FLOWER GARDENING.

CHAPTER I.

ON SOILS AND MANURES.

THE nomenclature of soils is exceedingly vague and indefinite; no very precise meaning being attached to the popular terms Clayey, Loamy, Sandy, and Peaty soil. An explanation of the common acceptation of these terms will, however, suffice for the present purpose; and those readers who incline to a more scientific acquaintance with the nature of soils must apply to some modern work on Agricultural Chemistry.

Clayey soil is stiff, tenacious, and retentive of moisture; therefore, although adapted for agricultural purposes when properly managed, it is by no means suitable for the culture of flowering plants. Clay varies in tenacity according to the quantity of alumina it contains. When intermixed with only a small proportion of this substance, and a considerable quantity

of decayed vegetable matter, sand, and calcareous earth, it is called *loam*, which, when well constituted, is the most fertile of all soils. When intermixed with rather a larger proportion of sand than usual, the name *sandy loam* is applied; and such soil, moderately manured, is the best that can be chosen for the formation of flower-beds. Loam is also indispensable in the pot-culture of plants. For this use, its texture ought to be rather sandy than clayey; and the top spit from an old pasture, or a common which is covered with a good sward, is preferable. Loam, and indeed soil of every other kind, ought not to be dug or stacked when wet.

Peat (sometimes called *heath-soil*) is composed of decayed vegetable matter, which for a long period has been macerated in water, but has recently lain dry, and become consolidated into a black fibrous earth. Fine sand is generally blended with it, which makes it more valuable for horticultural purposes, especially for pot-plants. Peat, from its porosity and nutritive quality, is particularly suitable for plants which have fine hair-like roots, such as *Rhododendrons*, *Kalmias*, *Azaleas*, and others. One class of plants, known among gardeners as "hard-wooded" plants, will not grow well in any other soil; and peat is an excellent ingredient in composts for most kinds of plants that are cultivated in pots.

Peat is sometimes confounded with *bog-earth*, to which it is in reality closely allied; bog-earth being peat in an unformed or transition state, and, therefore, much less valuable to the horticulturist.

Sand (silica) forms a component part of most soils. When a moderate quantity only is present, it acts beneficially on the soil by making it friable; but, when sand exists in excess, the soil is comparatively barren; because, of itself, sand affords no nutriment to plants, except when in the condition of what chemists call a *silicate*, and then only an extremely small quantity; therefore in selecting soil for flower-beds, very sandy earth must be rejected. Sand is, however, a very useful ingredient in composts for pot-plants; and, for some genera, as *Erica*, *Epacris*, and other peat-loving plants, it is essential, and if not naturally mixed with the peat, it must be added thereto. It is also of great value in the process of propagating plants by cuttings, many plants refusing to emit roots in any other medium. For this purpose, what is called *silver* sand is preferable; but as this is only found in a few localities, sharp river, or pit sand is often substituted.

Leaf-mould is a term applied to rotten leaves, when reduced by decay to the condition of an earth. It is a valuable substance in Gardening, because it not only acts mechanically, by making strong soil more open, but it also contains a considerable quantity of nutritive

matter; it is therefore much used in potting. Mixed with sand, it forms a tolerable substitute for peat when the latter is not procurable.

MANURES.

All substances which are added to the soil, in order to increase or restore its fertility, are properly denominated Manures. These are very various in their nature and origin,—some being derived from the animal, others from the vegetable, and a few from the mineral, kingdom. The latter class has been abundantly used within the last few years, but chiefly in agriculture. For Gardening purposes, the best of all manures is rotten dung. This is generally procured from spent hot-beds, formed in the first place of littery horse-dung, with an admixture of tree-leaves; and which, by undergoing the process of fermentation, has had its texture broken down, and reduced nearly to a state of mould. Chemists teach us that this fermentative process diminishes the value of the manure, by dissipating some of the elements of its fertility; but, on the other hand, this loss is, perhaps, counterbalanced by rotten manure amalgamating more readily with the soil, and being thereby more fit for the immediate use of plants. Rotten dung is largely used in composts for what gardeners call “soft-wooded” plants, when cultivated in pots, particularly for those

which require to be grown to a large size. Applied in smaller quantities, it is beneficial to nearly all kinds of plants.

Plants in the open ground, and flower-beds generally, are usually manured with a compost made of the decayed refuse of the flower-garden, and consisting of leaves, grass, flower-stalks, &c., which have been collected into a heap in some corner, and there turned and mixed, sometimes with the addition of quick-lime, till the whole is rotten. This, being less stimulating in its nature than stable-dung, is more suitable for the above purpose ; because, when ground is too highly manured, it induces plants to grow so luxuriantly that they do not flower freely. Rotten leaves are also frequently employed for the manuring of flower-beds.

Cow-dung is a favourite manure with florists, being by them considered indispensable to the successful culture of some of their chosen plants, as the *Ranunculus* and *Hyacinth*. Cow-dung should be collected from the pastures in summer, and laid in a heap in the compost-ground to decompose, for one year, at least, before it is used. During frosty weather, the heap ought to be spread out thinly, so as to expose the whole mass to the action of cold, by which the earth-worms that usually abound in it will be destroyed. This process ought also to be followed with all other kinds of dung when intended for pot-plants.

For making *liquid manure*—that is, fertilizing matter suspended in water—nothing at present known is equal in effect to good *Guano*. There are, however, so many methods practised of adulterating this valuable substance, that great caution is requisite in order to obtain it genuine. A handful of guano mixed with a common-sized watering pot of water makes an exceedingly nutritive and stimulating liquid, especially adapted for plants which have filled their pots with roots, and which it may not be desirable to re-pot. Given in moderation, this mixture acts beneficially upon all plants to which we have seen it applied; but, caution is necessary in administering it, for an over dose would be very injurious, if not fatal. Guano is sometimes applied by sprinkling the powder over the surface of the soil, to be dissolved and washed down by the rains, or by artificial watering.

Pigeons' dung, as well as that of domestic fowls, when steeped in water, make powerful stimulants, equal perhaps in strength to Guano, but less convenient to use.

Nitrate of Soda, one of the class of mineral manures, is occasionally used in the flower-garden, for re-invigorating the grass on lawns. For this purpose, it must be broken small, and sprinkled thinly over the turf, just before the grass begins to grow in spring.

Many other manures might be enumerated, but the foregoing are all that are absolutely required in the

department of Gardening upon which this work professes to treat. It may, however, be observed as a general rule, that all substances of animal origin ought to be decomposed before they are brought into contact with the roots of plants.

CHAPTER II.

IMPLEMENTS AND THEIR USES.—OPERATIONS ON THE SOIL.

FREQUENT stirring of the soil is essential to good Gardening. The operations by which this is effected are—1. Trenching: 2. Digging: 3. Forking: 4. Hoeing.

1. *Trenching*.—This term is applied to the deep stirring of the soil, (20 to 30 inches,) which is often necessary for the proper preparation of ground intended for shrubbery or flower borders. The tools required for trenching are a Spade, a Pick, a Line, and a Measuring-Rod. It is performed by digging out an opening, three feet wide and of the requisite depth, at one end of the ground intended to be trenched, and wheeling the excavated earth to the opposite end where it is intended to finish. Another parallel strip of the same dimensions is then marked out, and the

surface, or top spit, dug off with a spade and thrown into the bottom of the open trench, following with the loose earth, or shovellings; then a second digging is taken off in the same manner, laying the soil on the top of that previously removed, and so on till the whole plot is finished, when the soil wheeled out of the first trench suffices to fill up the last. In general, two spits, or spades, deep, is sufficient for Gardening purposes; but when the substratum is hard and strong, it is advisable to loosen the bottom of every trench with the pick, so as to obtain a greater depth of permeable soil. Trenching, however, is a very laborious employment, and no lady should meddle with it except to see that it is properly done.

2. *Digging* is the most efficient method of moving the soil of a garden. Although tiresome or even painful to an inexperienced person, a little practice makes it comparatively easy, so that in a moderate degree it might be done with facility by a female. The spade used for this purpose ought to be *light*, for convenience of handling; *bright* in the blade, for parting readily from the soil; and *sharp* at the cutting edge, that it may need less force to press it into the ground. In the same way as in trenching, an opening, or furrow, must first be taken out at the end where the work is to commence, and the earth be carried to the end, where it is to finish, ready for filling up the last

furrow. A second furrow or trench should then be dug in a line with the first, dropping each spadeful of earth in a reversed position into the open trench, and taking care to bury the manure properly, if any is used, which can only be done by keeping a wide, open trench. By proceeding thus in a regular manner, from right to left, and then back again, from left to right, the whole piece will, when finished, present a level surface. In digging for immediate planting or sowing, pains must be taken to break the lumps, and reduce the soil to what is called a fine tilth; but in what is termed rough or winter digging, that is, digging vacant ground in autumn or winter for the reception of a crop in the ensuing spring, the ground should not be broken, but left rough, in order to expose the greatest possible surface to the action of the winter's frost. This kind of digging is applicable to flower-beds which are to be planted with *Verbenas*, *Petunias*, and other summer blossoming plants, used so largely in modern Flower Gardening.

8. *Forking* is a kind of slight digging which is executed with a three pronged instrument called a *Fork*. It is useful for beds or borders of shrubs, or of herbaceous plants, when the ground is filled with roots which it may not be proper to disturb; and also for loosening the surface of ground which has become too much consolidated. In tenacious soils, winter digging

is best done with a strong fork ; but this is scarcely applicable to a flower-garden, where the beds ought to be formed of friable mould.

4. *Hoeing* is another method of loosening the soil. It also answers another equally important purpose—the destruction of weeds, by depriving them of their hold on the ground. Two very distinct kinds of hoe are used in gardening,—viz., the *Thrust*, or *Dutch Hoe*, of which there is only one form ; and the *Draw Hoe*, of which there is a great variety of sizes and shapes. The thrust hoe is best adapted for the flower-garden, because as the operator walks *before* the instrument in using it, there is no necessity for trampling on the ground which has been operated upon ; and besides, beds of a moderate size can be hoed without even setting a foot upon them.

Although not suitable for moving the soil to any considerable depth, the *Rake* may be properly included under this head as a pulverizing implement: after hoeing, especially, the rake is necessary to render the surface smooth and fine, and also to collect weeds, stones, or other extraneous matters. It is likewise used to level the surface of dug ground. The rake might also be applied with advantage to break and pulverize the soil, when sowing annual flower-seeds in patches in mixed flower-borders. The implement here alluded to is the *iron rake*, which is made of different sizes, in

order to be applicable to the various purposes above mentioned.

For carrying on the routine business of the flower-garden, a variety of implements is requisite ; but, as many of these are also common to the other departments of a garden, and are therefore presumed to be at hand when needed, it is only necessary in this place to describe those which may be supposed to be actually used by a lady desirous of exercise or recreation. All sorts of tools can be purchased ready-made at the horticultural implement maker's in London, and other large towns.

Besides the digging spade, before alluded to, a smaller instrument of similar make is very useful for transplanting, and for bedding out pot-plants. After digging out a hole for the reception of the ball, the spade is stuck upright into the ground, and the pot taken into the hand, and inverted ; then by smartly rapping its edge upon the upper end of the spade-handle, the whole mass of soil will slip entire out of the pot on to the other hand, ready to be reinverted, and planted in its proper position.

The *Garden-Trowel* differs in shape from that employed by bricklayers, the blade or plate being turned up at the sides till it resembles the half of a cylinder with two of its corners rounded off. This is an extremely useful instrument, both for taking up and resetting

small plants, and at the potting-bench for filling earth into the pots.

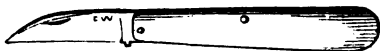
The *Dibber* is a blunt-pointed piece of wood with a cross handle at the top, handy for planting out small plants, such as annuals. The upper part of the handle of a worn-out spade, cut six or eight inches long, and a little but not too much pointed, makes a capital dibber.

Pruning-Knives are made of various sizes and shapes, novelty of form being thought by most cutlers of more consequence than goodness of material. That represented in the engraving is a good shape for general



pruning. The principal object, however, is a well-tempered blade which will carry a sharp edge.

Budding-Knives likewise differ greatly in make, the simplest (*see the engraving*) being, in our opinion, the



best. This knife might also be employed in preparing cuttings, and in other delicate manipulations for which a fine edge is required.

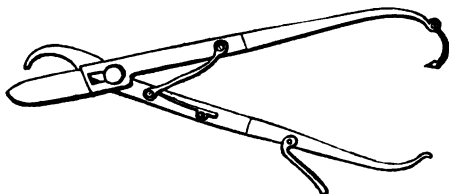
A *Budding-Gouge* has lately been invented by a medical gentleman (Mr. Lomax, of Weobley, Hereford-



shire) who devotes his leisure hours to horticultural pursuits. Its use is to separate the wood of the bud from the bark without injuring the growing point, which is frequently done when this operation is performed in the usual way by the finger and thumb.

The *Pruning-Saw* is occasionally necessary in the flower-garden for taking off branches which are too large to be easily removed by a knife.

The *Pruning-Shears* might sometimes be used for

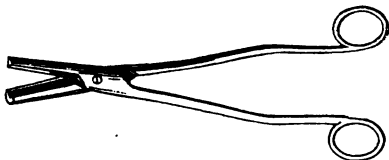


thinning out the heads of standard Rose-trees, and for other similar purposes. Made with long and light wooden handles, branches of tall shrubs might be removed by this instrument.

The *Hedge-Shears* resemble a gigantic pair of scissors, only the handles are of wood. They are necessary for clipping hedges and box-edgings.

Scissors might be employed with advantage in the removal of dead leaves, which disfigure any plant if permitted to remain upon it.

The *Flower-Gatherer* is so contrived as to retain a hold on the stalk of the flower after cutting it off the



plant, and is therefore more convenient than a knife or common scissors for gathering flowers.

Watering-Pots of various sizes must be provided for the flower-garden and plant-houses. Dry weather often occurs at the time the beds are filled, in May, and watering is indispensable until the plants have struck roots into the soil of the beds. For a lady's use, the watering-pot ought not to hold more than one gallon; it should also have a *long* spout, fitted with two *roses* or *nozzles*, of different degrees of fineness. If a man carries the water, and fills the small watering-pot,

watering will not be found very laborious work. It is best done in the afternoon or evening, or on shady days; and if possible, the water should always be exposed to the action of the atmosphere in a tank or pond for several hours, before using.

The same rule more especially applies to plants in pots, for which rain or pond water is much to be preferred.

The *Syringe* is a very useful instrument in plant-houses. Plants perspire profusely in bright sunny



weather, and a sprinkling of fresh water by means of a syringe, when the houses are shut up in the afternoon of such days, imitates a natural shower, and greatly refreshes the plants, besides keeping the foliage clean. The syringe might also be usefully employed in sprinkling tobacco-water over Rose-trees, &c. when they are infested with aphides.

Propagating-Glasses, necessary for the striking of cuttings, are purchaseable at the glass-dealers.

Hand-Glasses and *Bell-Glasses* are larger articles of the same character, which are used for the striking of cuttings on a more extensive scale, and also for the protection of delicate plants during winter.

A large assortment of *Flower-Pots* is requisite in a large garden. The common flower-pot is usually di-

vided into about twelve different sizes, the smallest being "thumbs," and enlarging in a regular ratio to sixties, forty-eights, twenty-fours, sixteens, twelves, eights, sixes, fours, up to twos. Several of the smaller sizes are again subdivided into large and small sixties, &c. The number of pots by which the sizes are designated is called a "cast:" thus, a cast of thirty-twos consists of thirty-two pots; a cast of fours, of four pots, and so on. Considerable inconvenience, however, arises in practice from the want of a standard measure for flower-pots, by which uniformity of capacity would be insured; whereas now, no two pot-makers agree exactly in the size of their pots, and they are frequently very ill made besides.

Pots for the purpose of growing Hyacinths and other bulbs are made of a deeper and narrower shape than the common flower-pot.

The *West Kent Flower-Pot* is a recent invention. Its peculiarity consists in having a loose bottom, which being raised by pressure from underneath, elevates the mass of soil above the rim of the pot, thus enabling the cultivator to ascertain the state of the roots of his plants without greatly disturbing them.

Ornamental flower-pots and saucers of very neat patterns, to contain plants for windows, are made by Mr. Hunt, whose name they bear.

Slate Pots of all sizes have been lately introduced to

the public by Mr. E. Beck, of Isleworth, who also manufactures very neat baskets of the same material to contain Orchidaceous plants. As a substitute for the wooden tubs which are generally used for large Orange-trees, the slate tubs answer admirably.

The *Seed-Pan* is shaped like a very shallow flower-pot, and is used for raising tender annuals and other plants from seed, and occasionally for holding cuttings.

For marking straight lines, setting out beds, and planting at regular distances, a *Rod* and a *Line* are necessary. The rod need be nothing more than a straight and light piece of wood, from six to twelve feet long, divided into feet by notches cut on one of its sides, and into half feet by smaller notches cut between the others. The line is formed of strong twine, wound upon a wooden or iron frame, which is called a *reel*.

For fastening Roses and other flowering shrubs to blank walls, or against the sides of buildings, a hammer, nails, and narrow strips of cloth cut into short lengths, (technically called "shreds,") are necessary. To carry the nails and shreds when in use, and also the pruning-knife and other small instruments, when such are needed, suitable pockets might be contrived in a strong brown-holland apron, which, with sleeves of the same, dog-skin gloves, and a pair of India-rubber goloshes to wear over the shoes, complete a lady's gardening costume.

A few light besoms and a strong basket or two should be kept at hand for the removal of the litter and dirt which must necessarily be made when pruning, planting, &c. In Surrey, a very useful utensil (there called a "Barge") for this purpose, and for carrying mould, &c., is made of thin pieces of cleft wood fastened together in the form of an oval basket.

Some other implements, such as those required for keeping grass in order, are used only by labourers, and therefore need not be enumerated here.

CHAPTER III.

LAYING OUT THE FLOWER-GARDEN.

To do justice to this subject, in all its bearings, would occupy a large volume. We shall, therefore, briefly notice a few of the principal points only, referring the reader to some of the standard works on Gardening for further information.

The *situation* of the flower-garden is generally contiguous to the principal living-rooms of the mansion, which arrangement gives the occupants of the house the advantage of enjoying a sight of the flowers from the windows at times when unfavourable weather or other circumstances do not permit a closer inspection.

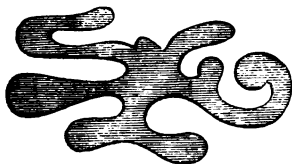
For this reason, such a situation is preferable ; whether the flower-garden consists of a geometrically formed parterre, in which the modern system of *massing* gay-coloured flowers is carried out ; or of clumps of mixed herbaceous plants, intermingled with shrubs, and scattered over the lawn, without being connected with each other so as to compose one whole. The first of these styles produces much the most striking effect ; especially when, viewed from a higher point, the spectator's eye embraces the whole of the design. The ground for this style of garden should either be a perfect level or a very gentle slope : its extent must be regulated, as a matter of taste, by the size of the house and grounds, and as a matter of economy, by the proprietor's means ; bearing in mind that a small, well-arranged, and neatly kept, flower-garden affords more real enjoyment than a place of much greater pretension, where there is not the necessary means for its proper management. In addition to the extra labour of keeping and stocking a garden in this style, pits, or other glass structures, must be provided for the wintering of Pelargoniums, Verbenas, Petunias, and other tender plants which will be required for filling the beds ; and this is an important point to be considered in determining the extent of the flower-garden.

With regard to the *plan*, its beauty and appropriateness will necessarily depend upon the degree of

taste possessed by the designer. Very complicated combinations should be avoided, as being more troublesome in after management, and likewise less pleasing in effect, than a design of simpler character, in which the harmony and agreement of all the several parts are more obvious. If the design is laid out on grass, it ought to be on a larger scale, or at any rate the beds should be separated by wider spaces, than if on gravel. Narrow strips of grass have a meagre effect, and are besides most inconvenient to mow when they pass between two beds of flowers. On the other hand, if the design is on gravel, the secondary walks, or those which form the divisions between the beds, must not be so broad as to rival the principal walks which lead across or round the parterre; for this in appearance would make the gravel equal in importance to the beds, whereas it ought to be subordinate. So, likewise, the beds should bear a relative proportion to each other and to the general design; extremely small beds being very objectionable, as producing no effect when planted, except in particular cases, where each is intended for a single plant: again, a few disproportionately large beds intermixed with much smaller ones will always appear to overpower the latter. In a word, the idea of proportion, as well as that of connexion between the several parts, must always be kept strongly in mind in planning a symmetrical flower-garden.

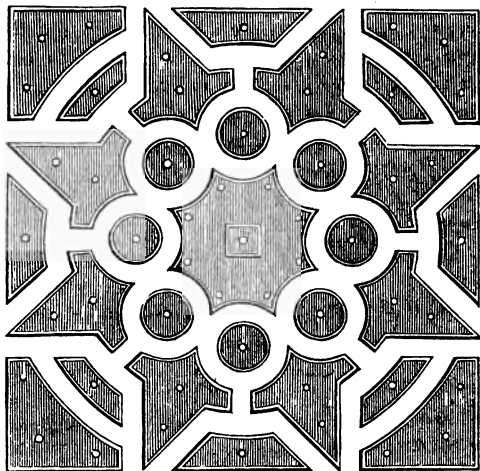
The *form* of the beds is an important consideration, both as regards beauty in themselves and effect when planted. Distortions resembling tortured tadpoles and impaled frogs are sometimes seen usurping the place of flower-beds; but such are always offensive to good taste, and should therefore be studiously avoided. Simple figures bearing an obvious relation to each other are more easily kept in order, less difficult to furnish with flowers, and more effectual when furnished than the fanciful forms represented in Fig. 1.

Fig. 1.



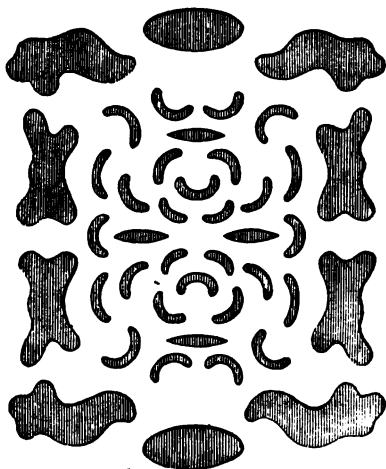
The plan Fig. 2 will serve to illustrate the style we recommend, both as regards the general plan and the

Fig. 2.



individual beds. It is copied from the Gardeners' Magazine, and although designed so long ago as the year 1619, it is in our opinion infinitely preferable to many modern flower-gardens, of which Fig. 3 is an

Fig. 3.



unpleasing example. The chief fault in Fig. 2 is, that some of the beds are too angular.

When the spaces between the beds are gravelled, an edging of some sort is indispensable for a dividing line between the beds and the walks ; but where turf is the intervening material, no edging is necessary. The best looking, most durable, and least troublesome edging, is dressed stone, but this is too costly for

general adoption ; as a substitute, earthen tiles of various patterns, slates, and stone-coloured bricks have been used. Of *vegetable* edgings, the best is the dwarf Box (*Buxus sempervirens suffruticosa*), because by an annual clipping it can be kept within narrow limits and in regular lines ; whereas the Gentianella (*Gentiana acaulis*), the Thrift (*Armeria maritima*), and other flowering plants employed for this purpose, although gay and pleasing whilst in blossom, are apt to grow more spreading and irregular, and to require replanting oftener than Box.

In planting a flower-garden of this description, a considerable degree of taste and skill is requisite, so to arrange the various colours that a striking as well as a pleasing effect shall be produced ; and to obtain this, the principle of *contrast* must be carried out as far as possible, so that the colour of each individual bed might, as it were, bring out and render more intense the colours of those contiguous to it. Thus, blue, red, and yellow are what are termed *primary* colours ; and it will be found, that red appears *more* red when placed in juxtaposition with blue or yellow, than when it adjoins purple or orange ; therefore, red, yellow, and blue may very properly stand next each other ; but purple, which is a mixture of blue and red, must not be placed in proximity to those colours without the intervention of some light or opposing tint, as yellow.

or white ; so likewise orange, which is a combination of red and yellow, ought not to be next to those colours, but should be relieved by blue or purple. Loudon somewhere lays down a rule, that "flower-gardens look best when the flowers are so arranged as to have a compound colour next the simple one, which is not contained in it;" and by way of illustration, he adds, that purple flowers, being composed of blue and red, should have yellow next them ; that orange, being composed of red and yellow, should have blue next them ; and that green (of which white is the equivalent in flower-gardening), being composed of blue and yellow, should be contrasted by red. Simple as these precepts seem, however, they are not easy to carry out properly in practice ; for, as a flower-garden is generally composed of a considerable number of beds which are seen from different points of view, it follows that every time the spectator changes his position, a somewhat different combination of colour presents itself, and this causes an harmonious disposition of tints to be a matter of considerable difficulty.

As a general rule, each bed ought to be filled with one kind of plant, and the corresponding bed in the plan must be planted either with the same thing, or with some plant that agrees with it in colour, height, habit of growth, and time of flowering ; for in a symmetrical arrangement of beds, where "each has its

brother," all these properties ought to be made to assimilate as closely as possible.

In some cases, however, a miscellaneous mixture of colours is admissible in a bed: for instance, in order to prevent the sameness occasioned by a too frequent repetition of white, or yellow, or any other tint which might become necessary for the purpose of producing the desired contrast, one or two mixed beds, in which the required tint predominates, might be employed instead of one whole colour.

When beds are scattered singly, or in small groups without any intimate connexion, over a lawn, in order to produce greater variety, each bed is sometimes composed of several colours disposed in belts thus:—the centre red, next a belt of yellow, and on the outside blue; or the centre purple, next white, and the margin red. Star-shaped beds may have every ray of a different colour, if desired.

Writers on this subject have laid down a rule, that when the flower-beds are on grass, what are called warm colours, as reds and yellows, ought to preponderate; and when on gravel, cold colours, as blue and white, should prevail; but this is a refinement which is seldom attempted in practice.

A list of plants proper for this style of gardening, with directions for their propagation and culture, will be given in a future page.

The other manner of laying out a flower-garden, which we alluded to at page 31, is called the natural style, in contradistinction to the geometric or regular style. Although not admitting of so much display as the method previously discussed, the natural style contains beauties which are peculiar to itself, and to some minds affords a higher degree of gratification than the greater gaiety of the grouping system. A smooth expanse of lawn, the boundary of which is lost among masses of evergreen and flowering shrubs and ornamental trees, with here and there judiciously placed single beds or small groups filled with mixed herbaceous plants, Roses, Fuchsias, and other popular flowers, constitute the leading features of the natural flower-garden.

Water, if procurable, should always be introduced in some form or other. Falling from the top, or springing from the base of a natural or an artificial rock, and then winding in a clear stream till lost in an expansive pond, whose undulated sides are partially fringed with low shrubs and weeping trees, is the most appropriate manner in which water can be employed in this case. Fountains, being in themselves artificial, are more suitable for the formal flower-garden, where everything is avowedly of that character. There a tastefully designed fountain, surrounded by an ample basin, would form a beautiful

centre-piece; it would also be practically useful, by affording a convenient supply of water for the beds when required. Nevertheless, this and other decorative objects partaking of an artificial character, as statues, temples, &c., may be sparingly admitted into a natural scene without impropriety, provided the situations for them are well chosen; but when taste and judgment are outraged by setting Diana in the middle of a pond, with Neptune quizzing her from the top of a mound near at hand, as is said to have been done in a celebrated garden near London, contempt is excited instead of admiration, and we ridicule what was meant to delight us.

Rock-work is by many considered a necessary part of a flower-garden; it is therefore frequently introduced where it ought not to be, besides being composed of a heterogeneous mixture of flints, sandstones, and vitrified bricks—a medley never seen in nature. To produce a good effect, artificial rock-work ought to be on a large scale; and, above all, the common error should be avoided of placing it in the middle of a flat, unconnected with any broken ground. The head of a piece of water is a suitable situation for a rockery; or the face of a steep bank which is partially shaded by trees might appropriately be covered with rough stones, and then made verdant by planting Ferns or trailing plants in the interstices. In addition to its appearance

as an object, increased interest attaches to a rockery through its being a fitting situation for the culture of a diminutive race of plants called "Alpines," and also for the more delicate species of Ferns; provision must, therefore, be made for these during the construction of the work, by forming here and there small hollows amongst the stones, to be afterwards filled up with proper soil for the reception of the plants.

In extensive places, both styles of flower-garden may be introduced; and if there are two garden fronts to the mansion, a geometrical plan might be laid out on one side, and a natural lawn on the other: or the regular parterre might occupy some recess in the grounds, unseen from the house, but connected with it by a walk, so contrived as to lead to the most favourable point for obtaining a general view of the whole design.

But, wherever it may be situated, a geometrical garden ought always to have some definite boundary, —either a wire fence for the purpose of excluding hares and rabbits, where these abound; or a low wall, upon which vases, &c., might be placed; or raised banks with rock-work, or a ha-ha, or even a belt of shrubs;—something to indicate that, although forming a part of the general pleasure-ground, it yet has a certain degree of individuality.

The proper disposition and formation of the walks

are of much importance: these should be no more than are required for affording ready access to all the principal parts of the grounds, for unnecessary walks rank among the greatest blemishes of a garden; therefore, a sufficient reason ought to be obvious for the existence as well as for the direction of a walk.

In the natural flower-garden, straight lines are generally to be avoided, graceful curves being much more pleasing to the eye; but, for every deviation from a straight line, there must be some apparent reason, as a bed, a shrub or group of shrubs, a tree, or a swell in the ground.

In the regular flower-garden, there is generally a principal straight walk passing through the middle, with perhaps another of equal width crossing it at right angles; or several walks may radiate from the centre, and unite with a circumferential walk which defines the boundary of the plan. In this style, however, both the direction and the breadth of the walks must necessarily be regulated by the general design of the parterre.

The width of the walks should be proportionate to the size of the garden. From five to six feet is not too much for the principal walks, and from three to four for the subordinate ones.

The best planned walks, however, will not be enjoyable unless they are also well made. To be walked

upon with comfort, a walk must be *dry* and *smooth in surface*. Dryness can only be ensured by placing a layer of stones or rubble beneath the gravel when the walk is made; and in low and damp situations a drain should be laid, in addition, along the bottom. Three or four inches of gravel spread evenly over the surface, rising in the middle more or less according to the width of the walk, and well consolidated by means of a garden-roller, finishes the process. Afterwards, the walk is to be kept firm and even, by occasional rollings; and free from weeds and litter, by weeding and sweeping when necessary. Where there is a choice of gravel, that from beneath a loamy soil is preferable, because it binds best, and is generally of the desired brown colour. Sandy gravel does not bind well, and chalky gravel has a glaring look, and adheres to the feet after frosty weather. When gravel-walks pass across turf, the edges will require cutting true at least once every year; and the overhanging grass should be clipped off by edging-shears, every time the lawn is mown. But a *true* edge need not be a *raw* edge, than which nothing is more unsightly; from half an inch to an inch is quite sufficient for the side of the walk to be lower than the edge of the turf. On steep slopes, a gutter of stones will be required along one side of the walk, to carry off the water in heavy rains, or the gravel will

be torn into unsightly channels, and will require repairing after every sharp shower.

Before leaving this part of the subject, we would again impress upon beginners in gardening the necessity of neatness and order, which in themselves constitute one of the principal charms of a garden ; and in their absence, the best filled bed and the gayest flowers lose half their power of pleasing.

CHAPTER IV.

OF THE CLASSIFICATION, PROPAGATION, DURATION, ETC., OF PLANTS.

BESIDES the systematic classification of Botanists, it is found convenient, in gardening, to group plants in divisions founded upon their duration, texture, and other peculiarities of habit or of structure. Thus, those plants which spring from seed, blossom, ripen their fruit, and then die, within the compass of one year, are called *annuals*; when they require two seasons' growth to complete these processes, they are *biennials*; and plants which exist through an indefinite number of years are known as *perennials*. Perennials are again subdivided into *herbaceous* or soft-stemmed plants, which for the most part die down to

the surface of the ground, after completing their season's growth, and shoot up anew from the root in the following spring; and *ligneous* plants are those whose texture is woody, as all kinds of trees and shrubs.

The class of herbaceous plants likewise includes *aquatics*, which grow only in water; *bulbous* plants, as the Hyacinth, Tulip, &c.; *tuberous* plants, as the Dahlia, Marvel of Peru, &c.; *creeping* plants, whose stems creep along the surface of the ground, putting out roots at the joints, and thus forming new plants; *trailing* plants, the stems of which, being too weak to grow in an upright position, trail along the ground without necessarily emitting roots, as the Verbenas: the terms creeping and trailing are also applicable to some ligneous plants.

Climbing plants, whether woody or herbaceous, have long slender stems which are unable to support themselves, and therefore require the aid, naturally, of plants of sturdier growth; or, when cultivated, of some artificial support, to which many species are enabled to adhere by organs provided by nature for that special purpose. Other plants of this class elevate themselves by twining round the nearest prop; and some, having no extra appendages or peculiar provision, sustain themselves by pushing their flexile branches over and among any contiguous shrubs.

Trees and shrubs, again, are either *evergreen* or

deciduous. Evergreens, as the Spruce Fir, and the Laurel, retain their foliage in a green and healthy state for several years, and consequently are never leafless ; while deciduous plants, as the Laburnum and the Lilac, shed all their leaves every autumn, and push forth a fresh clothing every spring.

Some subordinate terms used in gardening, such as *subevergreen*, *suffruticose*, and others of a like half signification, are of too little consequence to be noticed in a work of this nature.

Plants are propagated in various ways, but principally by seeds, cuttings, layers, *offsets*, and division of the root. Particular varieties are further increased by grafting, budding, and inarching.

In *sowing* seeds, the most important point is to proportion the depth of covering to the size of the seed ; large seeds, such as the Sweet Pea, Lupines, &c., requiring to be buried from half an inch to an inch deep, while very small ones, as the *Calceolaria*, should have the slightest covering possible of fine sand or soil. After sowing in pots, the soil must be kept moderately moist, but not wet, until the plants come up, when they will require a freer admission of fresh air into the frame or pit. While yet in the seed-leaf, that is, before they have expanded a second pair of leaves, technically called the "rough-leaf," the young plants must be pricked out, or they will be likely to damp off at the bottom of the young and tender stem.

Pricking-out, is the transplanting of each young plant separately, from half an inch to an inch apart, into other pots of prepared soil. After this process, the pit into which the plants are set should be kept closer and warmer for a few days, to encourage them to make roots; and in bright sunshine, a shading should be spread over the lights. When it is found that the plants have recovered from the check they suffered by transplanting, air must be admitted more freely, and, except in particular cases, shading dispensed with; otherwise, the young plants will be induced to grow up weakly, becoming what gardeners call "drawn." After a few weeks' growth, the young plants will be sufficiently robust to be potted off singly into small pots, using in all these initiatory pottings soil of a lighter character than is suitable for plants that are more advanced in growth. The next shift must take place as soon as the roots have reached the sides of the pots in sufficient quantity to make the soil adhere into a ball when the plant is turned out of its pot. Such treatment is applicable to almost all tender and half-hardy plants up to this stage of their existence; afterwards, many species will require a particular mode of management, according with their nature and habits.

Flower-seeds are also often sown in the ground, especially annuals; many of which, if sown early in September in the flower-garden beds, will live through

the winter, and blossom in spring and the early part of summer. This process is a very simple one. The seeds are thinly scattered over the surface of the ground, (which must be previously prepared for their reception by manuring and digging,) and then covered, by raking the surface smooth and even. The after treatment consists of thinning the plants to proper distances, and keeping them free from weeds.

Annuals are likewise sown in small patches in mixed herbaceous borders, for the purposes of creating greater variety and of filling up vacancies. This should be done after the digging of the borders in spring. Having pulverized with a rake the places where the smaller kinds of seeds are to be sown, scatter a few over a small circular space; these will be sufficiently covered by smoothing and firming the ground with a flat trowel, and then a shallow ring should be drawn with the point of the trowel to indicate that the place is occupied. Larger seeds might be sown on the rough surface and then raked in; but for those of the largest size, such as Lupines, which require deeper covering, the soil should be scooped out to the depth of an inch or so, five or six seeds placed in the bottom of the opening, and then the soil returned over them. The dwarf species must, of course, be placed near the front of the border, those of middle growth about the centre, and the tall kinds

towards the back. Some persons invert a flower-pot over each patch of seeds, taking care to tilt up one side as the plants come up, so as to admit light and air; and as soon as they are fairly above ground the pots might be taken off entirely, except frosty nights or heavy rains occur. Many more plants than are required to stand will generally come up, and these must be thinned in time to the requisite number, or their after-growth will be weak and unsatisfactory. From three to seven plants, accordingly as the habit of the species is spreading or upright, will be enough for a patch.

The seeds of biennial and perennial flowers are generally sown in beds in the reserve ground; pricked out into other beds when large enough; and in the following autumn, removed to the places they are intended to occupy permanently.

With few exceptions, it is from seeds only that new varieties of plants are generated, and this is effected by *hybridising*; a process by means of which astonishing improvements have been produced by modern gardeners on certain classes of flowers,—witness the *Rhododendron*, the *Azalea*, the *Rose*, the *Pelargonium*, and many other genera,—in which the varieties have been increased probably a hundred fold within the last ten years, whilst many of the new creations are of sur-

passing beauty. Hybridising is, therefore, a most interesting and instructive recreation ; and if carefully carried out, according to the general directions we shall here append, it cannot fail to be a profitable source of amusement, inasmuch as some new productions are certain to be the result of perseverance. Some slight knowledge of Botany is requisite to enable a beginner to recognise the different organs of the flower which must necessarily be alluded to in explaining the process ; and to acquire this knowledge, some elementary work, such as Dr. Lindley's "Ladies' Botany," should be studied. We may, however, here explain, for the benefit of those who have no leisure nor inclination to study that science, the meaning of the few botanical terms which will be employed in teaching the reader how to produce a hybrid plant. Botanists have arranged plants, according to their natural affinities, into certain divisions called *classes*, *orders*, and *genera*. A *genus* is a family of plants composed of individuals which have a strong relationship to each other in structure, properties, and general appearance. These individuals are termed *species*, which again are subdivided into *varieties*, or plants having still a greater structural similarity, and which are either natural or artificial hybrids, or have been produced by perpetuating some accidental difference in form, colour, or habit.

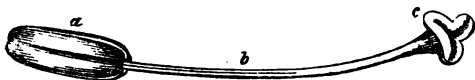
In many cases, it is difficult to determine what is a species, and what a variety; while some species, again, are so different in conformation (the Pear and the Apple, for instance, both of which are species of the genus *Pyrus*) that they cannot be, or have not yet been, made to cross with each other. The object of the hybridist is therefore to unite some desirable property of a particular individual, such as bright colour, with some other good quality of another plant, such as fine form, and thus to combine the merits of the two parents in their offspring.

There are male and female sexes in plants, and both generally inhabit the same blossom, although there are many plants in which they occupy separate blossoms, and in some instances one plant bears male, or sterile flowers, only, and another of the same kind produces none but female, or fertile flowers. The male part of the flower is called the *stamens*, one of which is represented at Fig. 4. It consists of the *anther*, *a*, which contains the fertilizing dust, or *pollen*; and the *filament*, *b*, which, although generally present, is not essential. The female part of the flower, (Fig. 5) consists of *a*, the *ovary*, in which are situated the rudimentary seeds; *b*, the *style*, (which is equivalent to the filament;) and *c*, the *stigma*.

Fig. 4.



Fig. 5.



Now, unless the pollen comes in contact with the stigma, fertilization does not take place, and no germ, or embryo plant, is generated in the seed; this process, however, is in general abundantly effected by the wind, insects, or other natural agents. To produce a cross progeny, therefore, it is only necessary to take pollen from one plant and apply it to a stigma on another plant; yet certain conditions must be observed in order to ensure success. In the first place, a certain degree of affinity between the two plants is essential, for it would be useless to attempt to obtain a hybrid progeny between such widely different plants as a Rose and a Rhododendron, or a Dahlia and a Peony: still, no definite rule can be laid down on this point, for in some instances, plants, which Botanists have placed in different genera, will cross readily, and in others, species that apparently are nearly related, will not; therefore, these limits can only be ascertained by experiment. In the second place, prior fecundation must be prevented, or all the labour will be lost; and, to guard against this happening, the anthers of the flowers intended

to bear the seed, should, if possible, be removed before the pollen is ripe, which may be done by carefully separating the petals of the corolla (or leaves of the flower) just before it naturally expands. The pollen must be taken off when dry, by means of a small camel's-hair brush, and applied to the face of the stigma whilst the latter is moist with a peculiar secreted fluid; this process being several times repeated at intervals of two or three days. It must be remembered that fecundation is more readily effected (in most cases, at least) by the pollen of the plant to be operated upon than by foreign pollen; and to guard against this occurring subsequently by means of bees or otherwise, some persons cover the blossoms operated upon by fine gauze. A few blossoms only on a plant should be operated upon, and if all others are removed, there will be a greater likelihood of obtaining good seeds; such blossoms ought also to have some mark attached to the stalk, so that their seed may be known.

A little practice will make any one expert in this business, and in the course of experiments many different modes of application will suggest themselves.

Cuttings are the next most extensive means of propagation. Various methods of treating these are in use, dependent on the nature and habit of the plant to

be propagated; some being much more difficult to strike (the technical term for converting a cutting into a plant) than others, and consequently requiring more skill and attention in their management. Almost all hard-wooded plants strike best when the cuttings are young and tender; the points of the young shoots, from a quarter to half an inch in length, are therefore chosen, and after trimming off the lower leaves with small scissors, and making a smooth cut across the bottom, close below a joint, they are inserted in properly prepared pots, slightly watered through a fine rose, to settle the sand firmly round them; and after standing a short time for the excess of moisture to drain away, they are closely covered with propagating glasses, and removed to a close house or pit, where a regular temperature of between 60° and 70° is maintained. The after treatment is comprised in shading from the sun, wiping the inside of the glasses dry every day, and giving a gentle watering when necessary. When it is found by examination that the roots are emitted, the glasses must be slightly raised on one side, to inure the young plants by degrees to the air; in a short time they will be strong enough to bear pricking out into other pots, using very sandy peat, and afterwards replacing them, for a few days, in the propagating pit or other close and warm situation. The pots for such cuttings must be

well drained, by first placing an oyster-shell or a piece of broken pot over the hole in the bottom, and laying upon this not less than an inch of broken crocks or small stones, over which a little moss or rough peat should be spread, to prevent the fine soil from filling up the interstices; the pot is then to be nearly filled with sandy peat, finishing with an inch or so of silver-sand at top, which will be all the better for a slight watering, to consolidate it before inserting the cuttings.

Most cuttings make roots in a shorter time when the pots are plunged in a bark-bed or other contrivance for supplying a gentle bottom heat, and there are some kinds that will not strike readily without such assistance. Camellias, and all the Pinus tribe, are found to succeed best when potted in autumn, kept in a cool house until they form a *callus* at the base, and then subjected to bottom heat to induce the emission of fibres. Camellia cuttings, of the single red variety, for stocks, are made from the previous summer's shoots, put in without topping, often five or six inches long; and, under the above treatment, striking glasses are not necessary. The terminal bud must also be retained on cuttings of Conifers, in order to form a straight leader for the future tree.

Verbenas, Petunias, Calceolarias, Nierembergias,

Heliotropes, and plants of a like character, for filling the flower garden in spring, are best propagated in autumn; this process, however, will be described more in detail, when treating of such plants specially.

Many flowering shrubs may also be propagated with facility by cuttings. Some, as Honeysuckles, the different species of Ribes, &c., strike readily from cuttings of the current year's shoots planted in autumn. Nothing more is required than dividing the young shoots into pieces from six to nine inches long, making a smooth cut close below a joint, and planting them about half their depth in rows in the open ground. Cleaning, and watering occasionally in droughty weather, is all the after care necessary. Many kinds of Roses, too, especially the China and Tea families, strike very freely, if the young shoots cut off in pruning are potted and placed in a gentle heat.

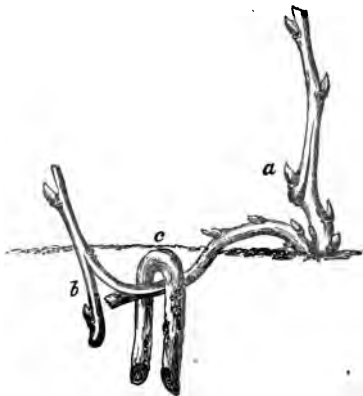
Carnations, Picotees, and Pinks, are frequently, the latter generally, propagated by cuttings, or what florists term *pipings*. These consist of the ends of the branches, (technically called "grass,") cut, according to the robustness of the variety, from an inch and a half to two inches and a half long; the lowest pair of leaves removed entirely from the stem without injuring the joint, and the others shortened about half their length.

The pipings are then to be planted in a mixture of fine earth and sand, watered through a rose, to settle the soil round them; and when sufficiently dried, covered closely with the moveable top of a hand-glass, which is not to be taken off for several days, and then only for a short time, to dry up any excess of moisture. Damp is to be guarded against, by occasionally taking off the glasses for half an hour in the morning or evening; and until the pipings have made roots, they must be constantly shaded from the direct sun by some temporary covering that will not exclude light. A much better strike is obtained by planting the pipings upon a moderate hot-bed, although a considerable proportion will always root without such assistance, if properly managed in other respects. Many herbaceous perennials will strike readily, if the young shoots are taken off when a few inches long, and planted under hand-glasses.

Ligneous plants are likewise increased by *layering*, which process is applicable to such plants as are difficult to strike by cuttings, and do not ripen seeds in this country. It is performed in the spring, before the sap rises, and consists of cutting a tongue or slit through a joint in a previous summer's shoot, and securing it beneath the soil with a hooked stick in such a manner that the slit is kept open; when gene-

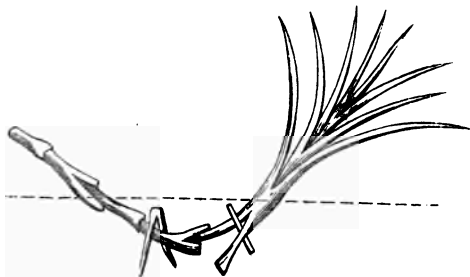
rally, by the next spring, (in some plants a longer period is required,) the tongue will have emitted roots, and thus an independent plant is formed. Figure 6,

Fig. 6.



which is copied from Loudon's *Suburban Horticulturist*, illustrates the layering of a woody plant; and Fig. 7, from the same work, shows how the same process is applied to Carnations, which is generally done in preference to piping, as being more certain to succeed.

Fig. 7.



Some sorts of herbaceous plants, such as Phloxes, Asters, and others, which have a natural tendency to spread at the root, can be propagated by division. This is done in spring, by slicing off pieces with a spade, without disturbing the parent plant. Some tubers, too, are increased in a like manner: for example, the Dahlia—only it is necessary that, to every division, a piece of the crown containing a bud should be attached, otherwise the root will never put forth a shoot.

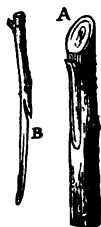
Offsets are the small bulbs which are naturally formed on the outer coats of larger bulbs, of which the Hyacinth furnishes a familiar example. These, when sufficiently advanced to separate readily from the

parent, are slipped off and planted in the ground, where they put out roots, and, in a year or two, attain sufficient strength to blossom.

Some shrubs, as, for instance, the Lilac and many sorts of Roses, throw up suckers by which they are readily increased. These are simply shoots which arise from buds on the roots; and, if taken off with a portion of fibres attached, they soon form strong plants.

When a distinct variety of tree or shrub, of a kind not easily propagated by cuttings, is originated, the way to increase it is by *grafting*, *budding*, or *inarching*. Very numerous methods of grafting have been invented, most of them being more curious than practical; we shall, therefore, here describe only two or three of the most useful modes. The best method, when the *stocks* (that is, the plant to be grafted upon) are small, is *whip-grafting*, called also *tongue-grafting* and *splice-grafting*, (Fig. 8.) The head of the stock (A) is first cut off a little aslant, at a smooth part; then a sharp knife is inserted through the bark, from two to three inches below the lowest part of the cut, and carefully drawn upwards so as to take off a narrow strip of bark, cutting but slightly into the wood, after which a downward cut into the stock is made across the first cut near its upper part. A piece of the last season's,

Fig. 8.



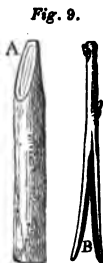
or of two years' old wood, five or six inches long, of the plant which is to be worked, is next taken, and a slanting cut made across its lower end of about the same length as the denuded portion of the stock, (as shown at B;) then make an upward cut into the graft so as to form a tongue, which must correspond in position with the downward cut previously made across the stock, into which the tongue is to be slipped, so placing the graft that the line of separation between the bark and wood lies upon the corresponding part in the stock; this arrangement brings the two inner barks (botanically, *liber*) into contact, which is the point where the junction takes place, as the two woods never unite. When the stock is not much larger than the graft, and the cut for the reception of the graft is not made deep into the wood, the inner barks can be made to touch on both sides of the cut; but if the diameter of the stock is five or six times that of the graft, contact can only be made on one side. If grafting is performed when the sap of the stock is in motion, the bark may be sliced off without greatly mutilating the alburnum, or outer wood; and if, at the same time, the graft is quite dormant, and the cuts are made dexterously, so as to be smooth and even, success is almost certain. Much, however, depends upon the tying: this is best done with a strong piece of matting, beginning at the bottom of the graft, and winding the matting *tightly*

round till the top of the stock is reached, then returning downwards to the starting point, and fastening with a knot to an end left for the purpose. The grafted part must then be covered with some composition which will protect it from the weather. The best for the open air is common grafting clay, which is composed of four-fifths of adhesive clay, one-fifth of fresh cow dung, and a portion of hay cut into short lengths to imitate the hair in plasterer's mortar; these ingredients must be thoroughly incorporated by repeated beatings with a spade, adding water till it is of the consistence of dough. Enough of this composition to cover the worked part is to be laid on, pressing it closely and smoothly with the hand, and tapering it off at top and bottom, that it may be well closed round the graft and stock. The claying is generally done by a boy who follows the grafter, and who should also now and then look over the grafts for the purpose of filling up any cracks that may be caused by the drying of the clay.

For grafting Azaleas, Camellias, and other house plants, grafting-wax is generally preferred, which is to be melted every time it is used, and applied, while warm, with a brush. One of the best kinds is composed of 3lbs. of pitch, 2lbs. of rosin, and $\frac{3}{4}$ lb. of suet or lard.

Saddle-grafting (Fig. 9) is preferred by some to

whip-grafting, inasmuch as the wound caused by cutting off the stock sooner heals, and the graft is less subject to be blown off, but it cannot be done with so much facility. In heading down the stock (A) for saddle-grafting, a long sloping cut must be made; and on the opposite side of the stock, as well as for a short distance below the sloping cut, the bark is to be shaved off in the same way as for whip-grafting. Then, the bottom end of the graft is to be split upwards about the same length as the denuded part of the stock, and the wood shaved away on the inside till it is like B, Fig. 9. The graft is now to be placed astride the stock, bringing the inner barks into contact wherever possible, and securing it firmly with matting.



Whatever method of grafting may be practised, it is essential that the clay and ties be removed as soon as it is found that a firm union has taken place; or the tightness of the matting will prevent the grafted part from swelling freely as growth proceeds, and the consequence will be a deformity, which sometimes causes the loss of the graft. The matting might be loosely twisted round again, as a slight protection to the still wounded parts, and each graft must be secured by nailing to a wall or tying to a stick, as the case

may be, otherwise they are subject to be blown off by rough winds.

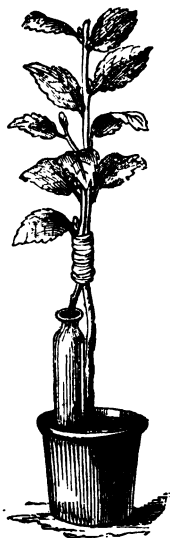
Inarching (in old books, called "grafting by approach") is a species of grafting, in which a graft from a growing plant is united to a branch or to the main stem of another plant, without separating it from the parent, or heading down the stock upon which it is worked. In performing this, a thin slice of wood is shaved off the side of the stock, and another similar piece off the branch which is required for propagation; the two cut parts are then brought together, joining the barks, as in grafting, and binding firmly with matting. Clay or wax may be used, but is not essential. When sufficient time has elapsed for a junction to take place, a notch should be cut in the worked shoot close beneath the tie; and a week or two afterwards, the head of the stock may be quite taken off and the graft be more deeply nicked, the object being to weaken by degrees its dependence upon the parent. If the separation be not cautiously and gradually effected, the inarched branch is very apt to die afterwards. This process is valuable for transferring the weak head of a delicate seedling to a more vigorous stock, and also for increasing varieties that cannot easily be propagated in other ways.

Inarching is sometimes performed as represented at Fig. 10. In this case, the shoot to be inarched is sepa-

rated from the parent plant, and its lower end is put into a phial of water.

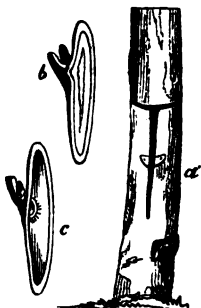
Budding is a neat and convenient mode of propagation, peculiarly suited to lady-gardeners. As in grafting, many methods have been devised, none of which are equal to that in common use for Rose-budding; this, therefore, is the only mode we shall here describe. Budding is done in the summer and autumn months, when vegetation is vigorous and the bark parts freely from the wood. A shoot, not too young, of the current year is requisite for furnishing the buds. This must not on any account be permitted to shrivel or dry after being cut from the parent tree; and to prevent such an occurrence, the leaves must all be removed, retaining about half of the petiole (leaf-stalk), for convenience of handling; the lower end of the scion should then be put into water, which will keep it quite fresh till next day if required. Have everything in readiness before proceeding to take off the buds; then,

Fig. 10.



after removing the prickles from the shoot without damaging the bark, insert the budding-knife about half an inch *below* the bud, and draw it upwards through the shoot till nearly as far *above* the bud, when a piece will have been removed resembling Fig. 11, *b*. The woody part is then to be separated from the bark by putting the point of the knife between them at the end above the bud, holding the bark firmly between the thumb and finger of the left hand, and drawing the wood outwards and downwards with the point of the knife and thumb of the right hand; when it will slip out easily if the shoot is in proper condition, leaving a shield of bark containing a bud, as represented at Fig. 11, *c*. Sometimes, however, the interior of the bud is torn out with the wood, leaving only its outer coats attached to the shield of bark, in which case, although the bark might unite with the stock, no shoot would be produced; this is readily ascertained by inspection, and if a small cavity appears inside of the bud, it had better be thrown away. The stock must now be prepared to receive the bud by first cutting lengthwise through the bark at a smooth part of a

Fig. 11.



young shoot, and then making a cross cut at its upper end, like Fig. 11, *a*. The bark can then be raised from the wood by the thin end of the knife-handle, which will admit of the bud being entered at the cross cut, and slipped by means of the petiole down the opening till the whole of the shield is buried beneath the bark of the stock. Some operators thrust the knife-handle forcibly between the bark and wood of the stock, to make a passage for the bud; but this is objectionable, because such force must necessarily injure the delicate surface of the alburnum (outer layer of wood), and thereby check, if not prevent, a free union between it and the inner bark of the inserted bud. When a stock is in proper condition for working, its bark can be parted from the wood by gently lifting the edges of the longitudinal cut without bruising the alburnum. All that now remains to be done is to wind a strip of soft matting or of worsted thread round the whole, beginning at the bottom, as in whip-grafting, and taking care to leave the growing point of the bud at liberty. After a few weeks, adhesion will have taken place, when the ties must be unloosed. Buds that are put in early frequently break and grow into shoots the same season, but less strongly than they would have done in the following spring; therefore, by way of strengthening such shoots, their growth should be stopped by pinching off the top

when they have pushed three or four inches long; they must also be secured from displacement by strong winds, by tying them to sticks or to the upper part of the branches they are budded upon. Next spring, whether the buds have previously broke or not, the stocks must be headed down close to the inserted eyes, and any young shoots that push from other parts of the stocks ought to be rubbed off. These directions are more particularly applicable to the budding of Roses; but the process is similar with most other kinds of plants, except that in these the buds are frequently put into wood of several years' growth.

CHAPTER V.

PLANTING, POTTING, WATERING, PRUNING, &c.

IN the whole range of horticulture there is not an operation of greater consequence to be properly performed than *planting*; for all our previous attention, from the sowing of the seed, through every gradation of growth, is of no avail if, by careless transplanting, we kill or cripple the plant it has cost us so much trouble to rear. Yet, this important matter is frequently

slurred over in a hurried and thoughtless manner, more especially as regards taking up the plants, whose most efficient feeders—that is, the fibrous roots—are too often left behind in the ground. In transplanting a tree, it should never be forgotten that the less its roots are mutilated, the less check to its growth will be caused by removal. Trees of considerable size can be safely transplanted by digging out the soil far enough round them to embrace most of their roots; and if this be done, the retention of a ball of earth round the roots, as insisted on by some, is not only unnecessary, but actually prejudicial; because it greatly increases the labour and cost of removal, without being in any way beneficial to the plant. The first step, then, in taking up a large tree or shrub, is to mark out a circle as far from the stem of the plant as its roots are supposed to extend; then throw off the surface soil within the circle, but not so deep as to interfere with the roots, and dig a trench round the outside of this space deep enough to go below the roots. Into this trench the soil is to be worked out from amongst the roots by means of a pick or a fork, throwing it back as you proceed, so as to keep an open trench, and progressing cautiously in this manner till all the roots are cleared of the soil. In the meantime, a hole should be dug for the reception of the plant; and, in doing this, the principal point is to make it wide enough to admit of

the roots lying straight without doubling or twisting, and not deeper than is requisite to afford a few inches of soil over the uppermost roots. When the subsoil is hard, it should be loosened, and a little of the better surface soil thrown in for the roots to lie upon. In all cases, where the soil is inferior, a few barrows of a better quality placed immediately round the roots will greatly facilitate growth. After setting the plant upright in the prepared hole, at the proper depth, spread out the roots regularly over the bottom of the hole, with their points towards the circumference, and cover them carefully with some of the best of the soil. When the roots are very numerous, it is best to arrange them in tiers, first covering the lowermost and then spreading another layer over them, taking care to leave no vacant spaces amongst the roots. By proceeding in this manner till all are covered, the upper roots will be brought near the surface, and the whole of them will be distributed regularly through the soil, instead of being crushed into a mass at the bottom of the hole. A few watering pots of water poured among the roots before the hole is quite filled up answer a good purpose, particularly if the soil is naturally light and dry ; but after such watering, the soil must not be trod upon.

Recently planted trees, especially if their heads are large and heavy, are liable to be displaced by winds ; and it is of consequence to guard against this, because

the rocking motion of the top strains and damages the unsettled roots, besides throwing the stem out of the perpendicular. To steady large trees, three pieces of wood are sometimes laid in the form of a triangle over the main roots, and fastened down by driving other hooked sticks into the ground at every angle. Or three forks may be placed slantingly against the stem, so as to act as props in different directions. But for tall, top-heavy trees in exposed places, three ropes fastened to the upper part of the stem, and secured to stakes driven into the ground on different sides of the tree, make the best security against winds. Whichever method of support is used, the stem of the tree must be guarded against injury from friction, by putting some moss or hay between it and the props or ropes. Smaller plants can be made firm by tying the main stem to an upright stake in the usual way.

The best season for planting is, undoubtedly, immediately after the fall of the leaf in autumn, provided the weather is suitable—that is, open and moist. For the removal of evergreens, and especially of Hollies, some persons recommend the months of April and May, or even later, on the ground that the roots being then beginning to move, they push at once into the fresh soil, and the plant, consequently, does not suffer much from the loss of its feeders; whereas, if evergreens are transplanted when in a dormant state, their

persistent leaves perish for the want of sustenance before the roots become active. We have found, however, that evergreens generally, and particularly the Fir tribe, may be transplanted with much safety in the autumn, provided it is done early enough for them to form new roots before all growth is arrested by severe weather.

Potting is likewise an important operation in gardening ; for unless plants in pots are properly potted, they cannot thrive. As it is of great consequence that the soil used should be in a fit state, that is, sweet and mellow, and neither wet nor too dry, a stock of the various kinds described at pages 12 and 13 had better be kept on hand, part of which should be stored in the potting shed, ready for immediate use. Thorough drainage is of essential importance to pot-plants ; for if the soil in a pot once becomes soddened with water, the plant which grows in it will never thrive well afterwards ; therefore, a quantity of broken crocks, sandstone, bricks, or charcoal, must be kept in readiness to be used as drainage. We will then suppose a plant in the stage it was left at page 48, to require shifting into a larger pot. The first part of the process is to place a hollow crock or an oyster shell over the hole in the bottom of the pot, and over this lay from half an inch to an inch of the broken materials before mentioned, upon which a thin covering of moss may be

spread, to prevent the soil from trickling amongst, and choking up, the drainage; or, instead, a handful of the coarsest compost should be put at the bottom; then having turned the plant out of its pot, and removed the former drainage from the bottom of the ball without injuring the young roots, set it in the centre of the new pot, with the surface of the ball a little below the top of the pot, to afford space for water when that is given. Next, fill up the space between the ball and the pot with compost, pressing it gently down by means of a thin piece of wood when the space will not admit the fingers, and dropping in here and there some pieces of charcoal or stones, for the purpose of keeping the compost open, after the fibrous and turfy parts decay. Such drainers are more imperatively required when what is called the "one-shift" system is followed. This plan, which has been strenuously recommended by some, consists in shifting a small plant, from a No. 60 or a No. 48 pot, at once into a pot large enough to sustain a full-grown plant, say a No. 8 or a No. 6; but, however advantageous this method might be in the hands of experienced plant-growers, it is certainly unsafe to be followed by those for whom this work is intended; and we therefore recommend as preferable, the more general plan of apportioning the size of the pot more nearly to the present size of the plant, and giving gradual and more moderate shifts.

Exceptions might, however, be made in the case of plants which only occupy their pots during one season's growth, such as Balsams, and some other tender annuals, Fuchsias, Chrysanthemums, and the like, which will be benefited by more liberal shifts. Except for very small plants, the soil used in potting, of whatever kind it might be, ought not to be made fine by sifting; because, by that operation, the fibres, small stones, and other matters which assist in securing porosity, are removed, and the soil thereby is made too close and compact for the free filtration of water through its mass. Instead, therefore, of sifting the soil, break the large turfy pieces with the hand into lumps of various sizes, greater or smaller, according to the extent of the shift. If dung and leaf mould are added to the compost, they should be run through a sieve, as they will then mix more thoroughly with the soil. When peat-earth alone is used for fine-rooted plants, such as the Heath-tribe, unless it naturally contains a considerable quantity of silver-sand, that substance should be liberally mixed with the peat to make it more permeable, and therefore less liable to get either very wet or very dry. No other sort of soil is so subject to extreme drought, when confined in pots, as peat, and in that state it is moistened with difficulty; sharp sand, and other undecaying materials, tend to prevent this excessive dryness, by keeping open

passages for the water. *Wet* soil must never on any account be used for potting valuable plants; it had better be rather dry than moist. On the other hand, the ball of the plant, to be potted, ought to be rather moist than dry.

Watering.—As plants abstract their food from the soil in a fluid state, it might naturally be supposed that, in administering water, the main object should be to maintain an uniform state of moisture in the soil, thereby furnishing the feeders of the plant with a regular supply of nutriment. But it has been found by experience, that pot-plants thrive best when their roots are subjected to moderate alternations of dryness and moisture; therefore, water ought never to be given unless absolutely required, and then in quantity sufficient to moisten the whole of the soil. Some practice is requisite to ascertain readily whether a plant is, or is not in want of water; the best criterion is the *feel* of the soil—its appearance is often deceptive. Peat, especially, sometimes deceives even experienced cultivators, by seeming sufficiently damp on the surface, when the bottom of the ball is perfectly dry; and if such a state of things continue long enough, the plant will greatly suffer in health, if it do not die. The best way to ascertain the state of the ball is to turn the plant out of its pot; but with the common flower-pot this cannot be done without destroying some of the young roots,

and herein lies the superiority of the West Kent flower pot noticed at page 26 ; however, persons accustomed to plants can generally pretty nearly tell the condition of the soil by its weight, and by the feel of the outside of the pot. In such cases of extreme dryness, the only remedy is to set the pot for an hour or two into a pan or a tub, and then pour water into the latter till it stands as high as the ball of earth is supposed to be dry.

The *quality* of the water exercises great influence upon the health of plants. What is called *hard* water is detrimental to vegetation generally, and more especially to Heaths ; *soft* water, on the other hand, is agreeable to all plants ; therefore, in the construction of plant-houses, provision should be made by means of tanks for a plentiful supply.

Pruning.—This term has a wide signification in horticulture, but in the flower-garden it has only a limited application. Evergreens, and other shrubs, are kept within due bounds, by cutting in rampant and straggling branches in winter. Honeysuckles, Passion flowers, Clematises, Climbing Roses, and shrubs of a like character, which are generally used for covering walls, verandahs, &c., require their previous summer's shoots shortened, and re-nailed, or tied, in spring. Standard and dwarf Roses demand more skill, because the habits of the various families differ so widely, that the method

of pruning proper for one variety, may be wholly unsuited to another. Thus, those sorts which habitually produce a number of moderate-sized shoots ought to have the weakest of such shoots cut clean out, and the rest shortened to three or four buds; whereas, other sorts which make only a few robust shoots, want very little shortening; or a profusion of wood, and but few flowers, will be produced. But, whatever their manner of growth, Roses ought never to be pruned till the severity of the winter is past, as sharp frost often kills the young wood of the more tender kinds; in ordinary seasons, the beginning or middle of March will be found a safe time.

Training.—A certain class of plants, whose habit it is to produce long flexile branches, are designated “climbers,” and such of these as are cultivated in pots must have some sort of frame or trellis upon which to train their shoots. Sticks are sometimes used for this purpose, but trellises of iron wire are much preferable, being more elegant in appearance, and also because they can be attached to the flower-pot; whereas, sticks must be thrust into the soil, in doing which, the roots are more or less injured. Such plants require frequent tying, or the shoots will get so matted and twisted together, that they cannot be separated without breaking.

Almost all pot plants require a certain degree of training, in order to give them a regular and handsome

form; for this purpose rods of hazel, or willow, or any straight growing wood, are suitable. As these must be forced into the ball, some damage to the roots is inevitable; therefore, the fewer sticks used the better for the health of the plant, as well as for its appearance; an over-tied plant looks formal and unnatural.

CHAPTER VI.

ON THE MANAGEMENT OF FLOWER-GARDEN PLANTS.

UNDER this head will be included all such plants as are usually employed for furnishing the beds of a geometrical flower-garden, one of the most useful of which is

The VERBENA. When the first scarlet species (*V. chamædrifolia*) was brought to this country, from Buenos Ayres, in 1827, it was thought that its beauty could never be surpassed; since that period, however, the art of hybridising has made such progress that numberless fine varieties of almost every colour have been raised: in the first place, by mixing *chamædrifolia* with *pulchella*, *Aubletia*, and others, and since by intermixing the various cross-breeds with each other, and with subsequently introduced species. Every season adds to the number of these beautiful productions, so

that those which are the very best one year are probably only second-rate the next season. We subjoin the names of some that are among the best for planting in masses, for which purpose self-coloured flowers are preferable; the two-coloured ones for the most part do not tell so well, and are therefore more fitting for baskets and vases, or for pot culture. Cultivators should annually inspect the new varieties in the nurseries, and make a selection of those they prefer; and in doing this, the habit of the plant must not be overlooked, as some varieties which have beautiful flowers (Robinson's Defiance, for example) have a coarse and rampant mode of growth, which makes them undesirable for beds.

Barker's St. Margaret's, red with purplish centre.

———— *Marchioness of Ailsa*, delicate pale pink.

———— *Empress of Scarlets*, vivid scarlet.

———— *Desirable*, purple lake.

Mont Blanc, white.

White Perfection, white.

Duchesse d'Angoulême, lilac.

Imperatrice Josephine, light blue.

Emma, dark blue or purple.

Louis Philippe, maroon.

Duke of York, maroon, with light eye.

Hendersoni, purple maroon.

Duke of Cornwall, red, with dark eye

Attraction, red, with light eye.

Miriam, scarlet.

Howardiana (Hislop's), crimson.

Victory, crimson, with light eye.

Lord John Russell, carmine.

Excelsa, dark rose.

Pink Perfection, bright rosy pink.

Lady Prudhoe, pink.

Gem of the West, shaded salmon.

La Reine, pink, with dark eye.

Reine des Francais, white, with crimson eye.

Besides the above varieties, *Verbena venosa*, a species from Buenos Ayres, of a peculiar rosy purple colour, is excellently adapted for large beds. It blooms abundantly, and is hardy enough to bear a moderate winter without protection, sending up numerous shoots in spring from its underground stolones.

The propagation and management of the *Verbena* is of the simplest kind. After fixing upon the sorts you intend to grow the following year, in September take off as many cuttings (about two inches of the tips of the shoots, cut close below a joint) as are likely to be required, and plant them in No. 32 pots, filled with light soil of any kind, and having an inch or so of sand on the top. Water through a fine rose, and set the pots in a pit or a frame, where they can be kept close and shaded during sunshine, for about a fortnight or three weeks, admitting sufficient air, however, to prevent the cuttings from damping; and, for the same reason, occasionally taking the lights quite off for half an hour in a morning, before the sun shines strongly upon them. As soon as the cuttings are found to be

rooted, they must be removed from the cutting frame, and gradually inured to bear exposure, the object being to prevent their growth as much as possible during winter. When cold and wet weather sets in, remove them to shelves near the glass in a greenhouse, or some similar structure, where all the attention they require in winter is protection from frost and occasional waterings. Early in spring—the earlier the better, if bushy plants are desired—the young stock must be potted singly into small pots, at the same time pinching off the tops, technically called “stopping.” The young plants will sooner establish themselves if confined for two or three weeks in a frame or pit where a little warmth can be applied to them; afterwards, admit air freely, and on fine days take the lights quite off, that the plants may be strengthened by exposure, one dwarf and bushy plant being better for bedding than several drawn and weakly ones. Water when necessary, and allow no weeds to grow in the pots till the time arrives for planting out, which in ordinary seasons will be about the middle of May. If more plants of any particular variety are wanted, the toppings of the straggling shoots may be put in, as cuttings, in spring.

THE PETUNIA is another plant well adapted for bedding, although not equal to the Verbena on account of its more straggling growth and greater aptitude to die

in wet weather, neither does it continue to bloom so late in autumn. Like the Verbena, a multitude of varieties have been produced from two or three original kinds, and these have nearly as great a diversity of colour as the Verbena. Many novelties are sent out every year by nurserymen, some of which are by no means improvements upon older sorts; it is therefore best for a buyer to see the new kinds in flower before ordering them. Very large flowers ought not to be chosen for bedding; the smaller ones retain their shape better. The subjoined list comprises some of the best for bedding:—

Enchantress, pale pink, with dark eye or throat.

Van Houttei, ground colour a dull pink, veined with purplish crimson.

Pet, like the preceding in colour, but the flowers are smaller.

Elegans, rosy purple, with dark eye.

Squibbiana, lighter purple, with dark eye.

Lady Peel, deep crimson purple, pale eye.

Sir Robert Peel, French white or pale lilac, with dark pencilled eye.

Candidate, white, with greenish eye.

We may in this place observe that the slight shades and delicate gradations of colour are so infinite in flowers, and so difficult to designate correctly, that in many cases the colours we have assigned to particular kinds must be understood as only an approximation to the exact tint.

Petunias can be propagated and managed through

the winter much in the same way as Verbenas, only it must be kept in view that cuttings do not strike with so much facility, and that they are more impatient of moisture. The plants are likewise very liable to get leggy, when wintered in store pots ; it is therefore a good plan to keep a few stock plants for the purpose of affording cuttings early in spring, which cuttings will generally make better plants for turning out than those planted in autumn. The Petunia is also readily propagated by seeds. These, gathered when ripe in autumn, raised in spring in the manner described at page 44, and planted in a bed towards the end of May, will generally produce a very pleasing mixture of colours, besides affording a chance of obtaining new varieties.

NIEREMBERGIA is a genus of plants nearly allied to Petunia. Four species are generally cultivated for flower-gardening ; and, so far as we are aware, these have not yet been intermixed.

N. filicaulis is a dwarf, slender-growing plant, suitable for very small beds, margins to other beds, or vases ; colour, a French white, or pale lilac.

N. gracilis is more robust in growth, and has larger flowers, of a darker shade of colour. This is a very desirable plant for bedding, as it blossoms profusely, and grows sufficiently strong to cover the ground well without being coarse ; its colour also is peculiar.

N. calycina has large white blossoms. Except for very small beds, some moderate growing white *Petunia* might be advantageously substituted for this plant.

N. intermedia is the prettiest of all, its colour being a peculiar purple-red, but its constitution is so delicate that it cannot be depended upon for beds, although in favourable seasons and situations it sometimes succeeds tolerably well.

All these may be propagated in the manner before-detailed for *Verbenas*, only, being more delicate, they require more attention.

PELARGONIUM.—This genus furnishes a number of admirable flower-garden plants, which are popularly known as *Scarlet Geraniums*, *Horse-shoe Geraniums*, *Ivy-leaved Geraniums*, and *Variegated Geraniums*. Of the first class we have not seen a better variety for a low bed than *General Tom Thumb*. Its foliage is a shining light green; its flowers bright scarlet, and numerous; and its habit dwarf and spreading. It is, however, rather tender in constitution, and therefore requires a little more warmth in winter than most others.

The *Bath Scarlet* and the *Frogmore Scarlet* are two older sorts, which bloom freely, and are fine in colour; and the same may be said of *Mrs. Mayler*, *Punch*, and the *Huntsman*, with many other varieties of more modern origin.

The *Horse-shoes* are distinguished by a dark mark

on the leaves, of the form of a horse's shoe. Some of these, as *Pre-eminent* and *Cottage Maid*, have the bright scarlet flowers of the preceding kinds, but those usually called by this term are descendants from *Pelargonium zonale*, an African species, and are known by gardeners as the *Red Horse-shoe*, which has crimson-red flowers; the *Purple Horse-shoe*, which has red flowers, suffused with purple; and *Compactum*, which has close heads of red blossoms.

The true Ivy-leaved Geraniums are considered distinct species by botanists. One kind (*Pelargonium lateripes*) has reddish flowers; another (*P. scutatum*) has nearly white blossoms. The latter is sometimes employed for bedding, when its long flexile shoots should be pegged down; but both species are chiefly useful for hanging over the sides of elevated boxes, baskets, or vases.

Many varieties of Variegated-leaved Geraniums are cultivated: the best of these for our purpose are the *Red-blossomed*, which has leaves margined with white, and deep-coloured small flowers; and *Mungles's*, which has leaves edged with clearer white, and flowers of a delicate pink colour. Another variety known as the *Cup-leaved* has pretty pink flowers; but the plant is more delicate than the two preceding sorts. A new kind has lately been raised (and is in the possession of Messrs. Lee, nurserymen, Hammersmith) which has

bright scarlet flowers, and promises to be a great acquisition to this tribe, if it should not prove too tender for bedding.

A very distinct and desirable *Pelargonium* has become extensively known within the last year or two under the name of *Lucia Rosea*. Its leaves resemble those of the Scarlets, and so also do its flowers in form and style, but the colour is a delicate pink.

To form large bushes for dotting about the lawn, or for single plants to fill large vases, several Scarlets of very robust growth are cultivated, of which those called *Smith's Emperor* and *Smith's Superb* will be found as good as any.

All these can be readily propagated by cuttings during the growing season; and they generally produce seed freely, from which new varieties might be raised. We prefer cuttings to pot singly in small pots and sandy soil, keeping them close and warm till rooted, and cautiously avoiding over-watering; for as the shoots are rather succulent, an over supply of moisture is certain to rot them. If seeds are sown in spring, and treated as detailed at pages 44 and 45, many of the produce will bloom the same season. In autumn, when the beauty of the flower-garden is over, the old plants should be taken up with good roots, and potted, cutting their heads well in; they ought then to be put under glass and encouraged to push young roots; and, if properly

managed during winter, they will form healthy plants for turning out into the beds again in the following spring. A stock of young plants ought, however, to be maintained to supply deficiencies, as some of the old ones will unavoidably die. Some of the hardier varieties may be wintered in a cellar, by merely covering their roots with soil; and when the weather is sufficiently settled in spring, they can be transferred direct to the flower-garden, without the trouble of potting them. We have found the Red Horse-shoe and the Red-blossomed Variegated bear this treatment best.

That branch of the family of *Pelargonium* which is known as the florists' varieties, and which has been so wonderfully improved by the florists of the present day, is occasionally made use of for forming beds of mixed colours. When this is required, plants which have had their growth stunted by confinement in small pots should be planted rather thickly in soil that is not rich; these will produce much more bloom than vigorous young plants. In autumn the plants may be taken up and potted, in the same way as the scarlet varieties. These kinds can also be similarly propagated.

A new class, designated *Fancy Pelargoniums*, has lately become popular. The best for bedding are said to be *Diadematum*, *Diadematum rubescens*, *Rouge et Noir*, and *Queen Victoria*. These, with such other varieties as are found to succeed planted out, would

form a novel and interesting bed in a warm situation.

CUPHEA.—Two new species of *Cuphea* are available for flower-gardening purposes. Both are neat in habit, and profuse bloomers; but the flowers of one, *C. strigulosa*, are not conspicuous at a distance, being small, and the colours—red and yellow—rather dull. It is, however, useful, on account of its continuing to bloom late in autumn. *C. platycentra* has rather larger flowers, and the colours—red, black, and white—considerably more vivid. The foliage is also a bright shining green, contrasting well with the flowers; so that, upon the whole, this plant makes an exceedingly pretty bed. Both species are easily propagated by cuttings.

SALVIA.—This genus (in English, *Sage*) affords some of the most showy plants in cultivation; although, from the height to which they grow, several of the finest cannot always be admitted into a regular flower-garden. *S. fulgens* and *S. splendens* produce long spikes of brilliant red flowers, but the latter generally begins to bloom too late in autumn to be valuable for bedding. *S. fulgens* makes a splendid *large* bed; and by pegging down its strong branches, it might be kept nearer the ground than it is usually seen. *S. patens* has beautiful deep blue blossoms, but its growth is too loose, and its flowers too short-lived, to make an effective bed.

S. chamædryoides and *S. angustifolia* have blue flowers, and as both these are low-growing plants, they are available for bedding. The fleshy roots of *S. Patens* resemble a dahlia, and should be potted or laid in sand at the approach of winter. Cuttings of all the species root freely.

CALCEOLARIA. — Although yellow flowers abound, very few of them are well adapted for planting in masses. The best we are acquainted with are the shrubby *Calceolaria rugosa*, *C. integrifolia*, *C. corymbosa*, and their varieties. These produce large bunches of bright yellow flowers, which, when the plants thrive well, continue in succession through the whole summer until late in autumn. There is, however, one drawback upon their merits, which is, that individual plants in a bed are apt to die suddenly, thus causing unsightly blanks. The only way of guarding against this evil is to keep a number of plants in pots in readiness for filling up these accidental vacancies. *C. floribunda* has light yellow, and *C. glutinosa* rich deep yellow blossoms, but neither of them is so showy in a bed as the preceding kinds. There are also some other new varieties which (as is the case with all novelties) are *said* to be superior to any of the old ones; this, however, has not yet been satisfactorily proved. One new shrubby variety, (called "Kentish Hero,") very distinct in character, has lately

been exhibited by Messrs. Henderson of Pine-apple Place. The colours are deep yellow and bright brown; and although the flowers are longer in shape than florists approve, its striking colours make it desirable. Another, called "Kayana," appears to be a desirable variety. Some shrubby *Calceolarias* have very dark-coloured flowers, approaching to maroon, when the blossoms first expand, but these dark varieties invariably fade after a few days' exposure to bright sunshine. Still, some of them have a striking effect when planted in masses; and among the best are *Atrofusca*, very dark brown; *Ion*, small round flowers, orange brown, with a rich maroon blotch; *Polyphemus*, dark purple-brown; *Talisman*, maroon. All the shrubby *Calceolarias* are increased by cuttings, but less readily than many other plants. It is frequently the month of October before shoots fit for the purpose—that is, young growing branches devoid of bloom—are obtainable: it is best to defer propagation till such can be got, when they must be planted in the manner previously directed for other cuttings, and afterwards assisted by a little bottom heat, if practicable. Pot off early in spring, and give the young plants liberal treatment, that their growth may not be checked; this being one, if not the principal, cause of their premature death.

What are termed *herbaceous Calceolarias* differ

widely from the preceding, in the superior size and beauty of their flowers, no less than in texture and habit ; but being delicate in constitution, and the flowers not produced in long succession, their culture is for the most part restricted to pots, although autumn-sown seedlings are sometimes planted in the following spring in mixed beds and borders.

THE HELIOTROPE (*Heliotropium Peruvianum*) deserves a place in every flower-garden, on account of its fragrance, free blooming, and pretty deep lilac colour. One or two slight seminal varieties have been raised in this country, none of which are worthy of a distinctive appellation ; but one, called *Voltaireanum*, whose flowers are deeper or more blue in colour, has lately been introduced from France. Cuttings of Heliotrope, put in in the usual way, root freely ; and, when rooted, they must be potted singly, and treated like Verbenas, &c. If some of the young plants propagated in spring are grown in pots during summer, they will bloom early in the following spring by the application of a little warmth ; and afterwards, they might be planted in the flower-garden beds, where, by pegging down their rambling shoots occasionally, to keep them within due bounds, they will continue to blossom till destroyed by the autumn frosts.

Tournefortia heliotropioides, as its trivial name imports, is considerably like the Heliotrope, but its growth

is more lowly, and its flowers have rather a disagreeable instead of a pleasant smell. Beds for which the Heliotrope is too robust, might be filled by this plant, which also is propagated by cuttings.

Myosotis palustris, poetically known as "Forget-me-not," is well adapted for a bed in a shady and damp situation, where few other plants will thrive. Its principal shoots require pegging down, and some of the strongest ought to be stopped, to cause the emission of laterals, by which its cærulean blue flowers will be freely produced. Cuttings can be obtained during summer from the sides of brooks, where the plant grows naturally; and if planted on a shaded border, and kept watered, these will be fit for bedding out in autumn, after the beds intended for them are cleared of their summer garniture. *M. sylvatica* is another species, which is said to make a gay blue bed.

ANAGALLIS.—(*Pimpernel*) Several garden varieties of this plant have been originated by crossing the natural species. The flowers of *Marryatta* are a kind of copper colour; *lilacina* is a pinky lilac, and there are others of different tints, but none so well adapted for massing as those with rich blue flowers, the best of which are *cærulea grandiflora* and *Phillipsii*. These, being less straggling in habit, cover the ground more closely than most of the other varieties, and are, consequently, more suitable for small beds. All the sorts

are very desirable for baskets, rockwork, or other places where trailing plants are required. They may be propagated by cuttings, and sometimes seeds are ripened.

NASTURTIIUM. — There are three varieties of the double Nasturtium (*Tropæolum majus flore pleno*), two of which are very showy when planted out. One of these is red, the other is orange-yellow, and of more robust growth; and the third is a dark brown, being the double of a variety called *atrosanguineum*. When these are bedded, a dry situation and light soil should be chosen for them, or they will not succeed. Cuttings are the only means of increase.

ALONSOA. — *Alonsoa incisifolia* and *A. linearis* are sometimes employed to make red beds, but although showy for a time they do not continue long in beauty. Seeds sown early in September and potted off the following month, will give good plants for turning out in spring; or they may be increased by cuttings.

BOUVARDIA *triphylla*, an old species, and *B. splendens*, of more recent introduction, produce little clusters of bright scarlet tubular blossoms, which are strikingly pretty. These plants are best propagated by pieces of the root about an inch long, which if put in early in spring like cuttings, but with their upper end just out of the soil, and submitted to a brisk heat, will emit shoots and form plants large enough to be turned

out by the beginning of June. The first named makes an excellent red bed if properly managed, and the other is said to be not inferior.

LOBELIA.—The individuals of this family differ widely from each other, some being tall and robust, bearing long spikes of blue or intense scarlet flowers; others being of delicate and humble growth, covering the ground with a carpet of azure blue or pure white blossoms, which are produced in succession until the plants perish by the autumn rains or early frosts. Of the tall growing kinds, several species are cultivated, by the intermixture of which some beautiful cross-breeds have been originated, similar to the parents in habit and character but differing in colour. These species are,—

L. fulgens, colour an intense deep scarlet.

L. splendens, like *fulgens*, but has narrower leaves.

L. cardinalis, flowers smaller, and lighter in colour.

L. syphilitica, blue.

The first three grow two or three feet high in light rich soil, and make a splendid appearance when in bloom; but the flowers are not produced in lasting succession, consequently, a bed does not continue a long time in beauty. *Syphilitica* is dwarfer and less showy. Their culture is exceedingly simple. In autumn, take up the roots and plant them thickly in large pots or boxes, protecting them during winter

from frost and wet. At any convenient period in spring, divide the roots or stocks into separate pieces, each with a few fibres attached ; pot them singly, and place them in heat till they get established, after which they should be hardened preparatory to being planted out as soon as the weather permits. The same treatment is applicable to the cross-breeds, among the best of which are,—

Longiflora, crimson-purple, tall.

Beauty of Bath, blue.

Belgica, rosy-purple.

Splendida, scarlet.

Propinqua, scarlet.

Atrosanguinea, very dark.

The trailing kinds used for bedding are principally varieties of *L. Erinus*, and are distinguished by the trivial names *grandiflora*, *compacta*, *compacta alba*, &c. All these are neat and pretty, admirably adapted for very small beds, or borderings for large beds of other colours. *L. gracilis* resembles *Erinus* in habit, but is less showy. *L. bellidifolia* is another dwarf trailing species which has larger and paler blue flowers than the preceding. *L. ramosa* is a beautiful dark blue annual, but too tender to be always depended upon for bedding, as likewise is *L. cærulea*, a very handsome sub-shrubby species ; the beauty of these two kinds, however, makes them worth a trial in warm places.

L. Erinus, gracilis, and bellidifolia are readily propagated by cuttings, and seeds are sometimes produced; *ramosa and cærulea* are always increased by seeds.

ISOTOMA.—Allied to the Lobelias, and formerly classed with them, is *Isotoma axillaris*, a dwarf bushy growing plant, whose blue flowers are not numerous enough to make a showy bed, although it is sometimes employed for this purpose. It is useful for mixed beds, baskets, &c., and may be increased by cuttings.

COREOPSIS *lanceolata*, a hardy herbaceous plant, is very useful for a yellow bed. It grows about two feet high, and blossoms from June till frosts come. The plants must be taken up and divided every spring, when they may be put at once into the bed they are to occupy. Or they may be planted in the reserve ground when divided, and removed with balls in May to the flower-garden to take the place of some early flowering annual or bulbous plant.

RUDBECKIA *chrysomala* is also hardy and herbaceous, similar in colour and habit to the preceding, and requires the like treatment.

PENTSTEMON is a genus of herbaceous plants, most of which are handsome, and some few proper for bedding. The most suitable for this purpose is one universally known by the name of *P. gentianoides*, but which is said not to be that species. It has several varieties, called *alba, coccinea, grandiflora, and grandis*,

which differ in the size as well as the colour of their long loose spikes of flowers. The first is white, the second red, the third red, and the fourth a reddish purple, all being alike suitable for beds in which plants from two to three feet high are required. They are easily propagated by cuttings, some of which ought always to be potted in autumn on account of the plants not being hardy enough to bear a wet and cold winter. What is now said to be the true *gentianoides* is a rampant growing, shy blooming, dull blue kind, of no value for flower gardening. *P. speciosum* makes a beautiful blue bed while it lasts. Practically speaking, this plant is only biennial; therefore, its seeds should be sown in spring, the plants kept in pots till the succeeding spring, and then planted in the bed where they are to bloom; for although classed in catalogues as a hardy plant, the wet of winter is almost sure to destroy it.

CAMPANULA (*Bell-flower*) is an extensive genus, consisting, for the most part, of showy herbaceous plants, several of which are serviceable for bedding. *C. Medium*, commonly known as the Canterbury Bell, is a biennial which grows about two feet high, and has flowers varying in colour from very dark blue, through all the intermediate tints to white. If seeds are sown in May, and the plants put out in autumn, they will bloom in June or the beginning of July of the following year; and may be cleared off in time to be succeeded by seed-

ling plants of *C. carpatica* (a dwarf bushy perennial kind with large blue flowers) which have been grown in pots for the purpose. *C. grandis* is about three feet in height, and has long spikes of dark blue blossoms, very showy, and well adapted for a large bed to bloom in June. This species increases largely by offshoots at the root, and if these are taken off in autumn and planted thickly in a bed, they will produce a mass of bloom the next summer; as, however, they give no succession of flowers, the plants must be removed after flowering, and the bed be filled with something else. *C. fragilis*, and *C. garganica*, both trailing blue flowered hardy species, might be used for small beds.

ÆNOTHERA is another herbaceous genus which contains some exceedingly handsome species. *Æ. macrocarpa*, and *Æ. Missouriensis* are so much alike that they might be planted together. Both have long trailing shoots and large yellow flowers. *Æ. taraxacifolia* is similar in habit, but has white blossoms which expand only in the evening. Cuttings of all these root readily, or the old plants might be potted in autumn in case they are not intended to occupy the same bed a second season. *Æ. Drummondii* is a tall growing yellow species, which may be dwarfed by pegging down the shoots. It is propagated by cuttings and by seeds, but must be wintered in pots. Many of the Ænothers are strictly annuals, and several of these make showy beds,

especially *Œ. Lindleyi* (purplish), *Œ. roseo-alba* (rose and white), and some others. A genus named *Godetia*, separated from *Œnothera*, and differing from it only in some obscure botanical characters, likewise contains two or three showy annual species, which, with the annual *Œnotheras*, should be sown early in spring in the beds where they are to blossom. As, however, none of these will continue in beauty through the whole summer, the beds will require filling a second time from the reserve garden.

CHRYSEIS *Californica* (yellow) and *C. crocea* (orange) are two hardy herbaceous plants, whose habit is to trail over the ground in a somewhat straggling manner; nevertheless, their flowers are extremely showy, and the fine deep orange colour of the latter is perhaps not surpassed in nature. Sow the seeds of both kinds (which only differ in colour) where the plants are to bloom, as they do not bear removal well. If the seeds are sown in autumn, the plants will blossom earlier, but their beauty will then be over soon after Midsummer.

A seedling variety of *Gaillardia bicolor*, named *Wellsiana* after the raiser, is a suitable plant for a good sized bed. It grows upwards of two feet high, has showy yellow and brown flowers, and is propagated by cuttings, which must be wintered in pots.

SILENE *Schafta*, (*Catchfly*), a dwarf close-

growing herbaceous plant with red flowers, is useful for a small bed, which will be gay in July or August. It produces seeds, plants from which will stand the winter in dry situations. *S. compacta* is a taller red-flowered biennial, seeds of which ought to be sown in spring in the reserve ground, from whence the plants are to be removed to the flower-garden in the following spring, and planted rather thickly.

ANEMONE.—The double and single varieties of *coronaria*, which is a tuberous rooted species, generally represent this genus, but there are two herbaceous perennials (if not more) which will be found useful for bedding. *A. vitifolia* is a tall robust white flowered kind, which makes a showy *large* bed for the middle of summer. *A. Japonica* is of lower growth, and has large red blossoms which are produced in succession through the autumn. The former is propagated by seeds; the latter can be multiplied to any extent by scattering the smallest pieces of its fibrous roots on pots of light soil and very lightly covering them; then, if stimulated by a gentle heat, each bit of fibre will become a plant, which when large enough should be potted separately, and kept ready for turning into the beds after they are cleared of early annuals, or other spring flowering plants. An intermediate variety has been produced in the garden of the Horticultural Society, by crossing the two last named species. Its

flowers are of a pale pink colour, and more regular in form than those of Japonica; it also blooms earlier. All these are quite hardy.

AGERATUM *Mexicanum* is called an annual in plant catalogues; it is, however, best raised from cuttings in the same manner as Verbenas. If the young plants are potted singly in spring, and encouraged to grow till fit to be turned out, planting them thinly, as their habit is robust,—they will reach a height of about two feet, and produce their cærulean blue flowers in abundance through the summer and autumn. Another kind, known in gardens as *A. caelestinum* has very similar flowers, only its habit is less coarse. This, although a sub-shrubby greenhouse plant, might be treated precisely in the same way; or if the old plants are taken up in autumn and wintered under glass for turning out in the spring, they will bloom much earlier.

CHÆNOSTOMA *polyanthum* is a slender, trailing greenhouse plant. Its flowers are very pretty, being of that peculiar tint which is designated “peach-blossom” (although nothing like the colour of the blossom of the peach tree), relieved by an orange-coloured eye. We have never seen a bed composed of this plant, but no doubt it would answer well for that purpose, its flowers being bright and lively, and produced in succession. For baskets, vases, or rock-work, it is excellently

adapted : it is propagated freely by cuttings in the usual way.

LANTANA *Selloviana* will make a lovely autumn bed, in a fine season and warm situation. Its blossoms are produced numerously, and being of a rosy-purple colour, with a whitish centre when they first expand, they have a very lively effect ; its habit too is very dwarf, for which reason it is excellently adapted for small beds. *L. crocea*, copper-coloured ; *L. mutabilis*, yellow and rose-coloured ; and *L. mixta*, red and yellow ; are also available for beds. Strictly speaking, all these species are stove plants, and consequently, they require more warmth in winter than a common greenhouse affords ; neither will they bear turning out in spring with Verbenas, &c., but must be gradually inured to withstand exposure in June, when they will usefully succeed autumn sown annuals, and other early flowers whose season is then past. They may be propagated by cuttings in autumn, and *Selloviana* often ripens seeds.

A species of PLUMBAGO recently introduced from China, called *Larpenæ*, promises to be a valuable bedding plant. Its habit is low and compact, and its blue flowers are produced plentifully in small clusters. It is, however, doubtful whether its thin petals will have strength enough to bear the rough weather to which they must necessarily be exposed when planted

out. An old species called *Capensis*, which has pale blue blossoms, sometimes succeeds in favourable seasons, but for general use it cannot be recommended.

SENECIO *elegans* is, strictly speaking, an annual; but there are two varieties of it, one with double purple, and the other with double whitish flowers, which are perpetuated by means of cuttings, and are treated in other respects as greenhouse plants. Both these make very pretty beds; their chief fault is that they do not last long, especially in wet weather.

GAZANIA *uniflora* is a half-hardy dwarf spreading plant, which bears a succession of showy yellow flowers, and is therefore suitable for bedding. Another species called *G. rigens*, has still more showy blossoms, and would probably answer for this purpose. Cuttings of both strike freely.

To form white beds, in addition to white Verbenas, white Petunias, &c., the double variety of *Pyrethrum Parthenium*, and of *Matricaria grandiflora*, may be used. Both are hardy and readily increased by cuttings. A double variety of the common Sneezewort (*Achillea ptarmica flore pleno*), might also be employed for a white bed. This can be increased to any extent by division, and is quite hardy. The double white Rocket (*Hesperis matronalis flore pleno albo*) which also is hardy, is a very handsome plant while in blossom, its large and fragrant flowers being produced

in long spikes like those of a Brompton Stock. A more robust and hardy variety has flowers of a French white colour. Both varieties are propagated by slips, which are sometimes emitted from the sides of the flower stems after the flowers have been cut off. A young stock must be raised annually, as the plants do not bloom well a second year.

SNAPDRAGON.—Few plants make a better bed of mixed colours than the Snapdragon (*Antirrhinum majus*). It is hardy, seldom wholly out of bloom, and the colours of some of its numerous varieties are very striking. Attempts have lately been made to originate improved sorts, but hitherto without great success, although some advance has certainly been gained. Showy colours should be selected for bedding, such as the yellow, white, dark crimson and yellow, crimson with white tube and yellow lip, pink with white tube, the striped (*caryophylloides*), &c. Cuttings struck under handglasses in August, and afterwards planted out to acquire strength, might be removed to the flower-garden in spring, and will flower nearly all the season if not permitted to seed; a single spike of seed might, nevertheless, be retained on the best varieties from which to obtain new sorts.

DIANTHUS.—In the genus *Dianthus* is comprised several beautiful species, including those universal favourites the Pink, Picotee, and Carnation, which, how-

ever, although admissible into the regular flower-garden, are more properly classed under the head of florists' flowers. *D. barbatus*, the Sweet William, is (practically) a biennial, the seeds of which should be sown in May; the seedlings pricked out when large enough, and the plants removed to the place where they are to flower after the beds are cleared in autumn; or, if more convenient, early in the following spring. After flowering, the plants ought to be taken away, that the beds they occupied might be refilled, when any fine or double varieties among them can be perpetuated by cuttings. In saving seeds, select from the smoothest petalled and best coloured flowers, including some of all the various tints.

DELPHINIUM.—The double variety of *Delphinium grandiflorum*, another hardy herbaceous plant, bears a beautiful flower, unequalled in the richness of its deep blue colour; but as it does not produce a succession of bloom, the plants must be set wide enough apart to admit something between them which will flower later in the season. *D. Barlowii* is a double variety of some tall species,—very handsome, but too high for a bed in a small garden. The young shoots taken off when two or three inches long, will strike root readily under a handglass.

PHLOX.—This genus furnishes some very pretty things for mixed beds, especially amongst the new and

improved varieties. The following are some of the best :

- Omniiflora*, white 2½ feet high.
- Sauveolens*, white, 2 feet.
- Van Houttei*, striped, 2½ feet.
- Princess Marianne*, striped, 2 feet.
- Anais*, white, with rose centre, 2 feet
- Chauvertii*, rosy purple, 2½ feet.
- Murrayana*, rosy-lilac, 2½ feet.
- Selsdoniana*, rosy purple, 1½ feet.
- Speciosissima rubra*, rosy pink, with light eye, 3 feet.
- Rubra superba*, purple-crimson, 3 feet.
- Picta*, white, with rosy eye, 2 feet.
- Suffruticosa*, purple-crimson, 2 feet.
- Stolonifera*, pink, trailing.
- Subulata*, do. do.
- Setacea*, do. do.
- Nivalis*, white, do.

The four last, which blossom in April and May, are perhaps more suitable for rockwork than for beds, on account of their small size ; they can be propagated by cuttings, and some should always be put in in autumn. The others, which are hardy perennials, flower through the summer months, and may be increased either by cuttings or division in spring.

PÆONY.—The different varieties of the common Pæony (*Pæonia officinalis*), and of *P. albiflora*, are sometimes used for a large bed. These, for the most part, blossom in June, so that later flowering plants must occupy the same bed to produce a prolonged display, and for this purpose a selection from the Phloxes named

above, might be employed. The Pæonies will then require to be planted at wide intervals, to give room for the Phloxes to grow among them; and some attention will be necessary to prevent the large leaves of the former from overshadowing and stifling the latter during their growth. Or, if still later flowers are desired, some of the low-growing Asters, such as *Amellus sibiricus*, *spectabilis*, *elegans*, and *hyssopifolius*, may be taken, all of which grow from two to two and a-half feet high, and have showy blossoms of different shades of blue. These are all hardy herbaceous plants.

FUCHSLA.—For permanent beds—that is, beds which do not require to be varied in colour every year, nothing excels some varieties of *Fuchsia*, and the best we have seen for this purpose is *F. Eppsii*. Its blossoms are red, large, and showy, and its habit is low and spreading—just that necessary for a symmetrical bed. We cannot guarantee its hardiness in winter; therefore, cuttings ought always to be put in in autumn. Another variety, called *globosa splendens*, is said to be a good one for bedding. Some of the smaller flowered sorts, as *gracilis* and *virgata*, also make good beds; and these being hardier than the preceding kinds, will shoot up from the roots in spring if their tops are killed in winter. All are readily increased by cuttings.

ROSES.—Some of the China and Tea-scented Roses make ever-blooming beds, either in mixed varieties or in

masses of colour. Rich soil is indispensable for Rose-beds, otherwise the flowers will be few and small ; for their successful culture, therefore, the soil of the beds should be taken out eighteen inches deep, five or six inches of brickbats, or other rubble, laid in the bottom if the situation or the sub-soil is at all wet, and the openings filled up with a mixture of turfy loam and rotten dung, in about equal quantities. Roses of this class are much less hardy than the sorts usually grown in the open ground, therefore they need some protection from severe frosts. A mulching of rotten leaves spread over the surface of the beds, and some Fern fronds, branches of Furze, or of Spruce Fir, stuck amongst the stems, will be sufficient in ordinary winters ; but whatever kinds of protection may be used, it must of course be removed in the spring, when the rotten leaves may be lightly forked into the beds. Cuttings strike with great facility when potted in sand and placed on a gentle hot-bed, and a few plants thus propagated ought always to be kept in pots ready for filling up accidental vacancies. Mr. Rivers, of Sawbridgeworth Nurseries, one of the best authorities on the subject of Roses, recommends the following varieties :—

China Roses for a mixed bed.

Aimée Plantier, bright fawn colour, tinged with blush.

Archduke Charles, rose, changing to crimson.

Augustine Hersente, bright rose.

Carmin Superb, deep carmine.

Cels multiflora, blush.

Clara Sylvain, white.

Cramoisie Supérieure, brilliant crimson.

Eugene Beauharnais, bright amaranth.

Eugene Hardy, creamy pale blush.

Madame Bréon, brilliant rose.

Mielléx, white, tinged with lemon.

Mrs. Bosanquet, pale flesh.

Prince Charles, brilliant carmine.

For a White Bed.

Clara Sylvain. *Madame Bureau.* *Madame Desprez.*

For a Crimson Bed.

Citoyen de Deux Mondes. *Cramoisie Supérieure.*

Eugene Beauharnais. *Imperatrice Josephine.* *Victoire d'Aumay.*

For a Blush bed.

Caroline de Berri. *Cels Multiflora.* *Mrs. Bosanquet.* *Napoleon.*
Sully.

For a Carmine bed.

Carmin Superbe. *Prince Charles.*

For a Rose-coloured bed.

Augustine Hersente. *Madame Bréon.* *Madame Chavent.*

Tea-scented China Roses for a mixed bed.

Abricoté, bright rosy fawn colour.

Adam, rose.

Barbot, fawn-coloured rose.

Bougère, glossy bronzed rose.

Comte de Paris, pale blush.

Elisa Sauvage, pale yellow, orange centre.

Eugene Desgaches, bright rose.

Josephine Malton, shaded white.

Julie Mansais, white, with lemon centre.

Marshal Bugeaud, bright rose.

Victoria, fine pale yellow

For a Yellow bed.

Chrysocome. Duchesse de Mecklenburgh. Elisa Sauvage. Jaune Pauachée. Pactolus. Victoria.

Devoniensis also makes a superb yellow bed, and Fabvier (scarlet) is the best of its colour. The Queen, a fawn-coloured Bourbon Rose, is another excellent kind for this purpose.

SPRING FLOWERS.

Most ladies are fond of spring flowers, and where such a partiality exists, the following among herbaceous plants will be found well adapted for small beds, as they are very dwarf in habit and prolific in bloom. The principal objection to the extended cultivation of these and similar plants for massing is, that they blossom in the spring months only ; consequently, after May or the beginning of June the beds they occupy will be blank, and must be filled a second time with some later flowering plants ; and this necessarily causes much extra labour in transplanting, watering, shading in hot weather, and so forth. But the spring plants need not be destroyed. If carefully removed to the reserve ground, and tended afterwards, till they get root-hold, many of them will bear to be again transferred to the flower-garden beds in October. It is requisite, however, to keep a supply of younger plants on hand to take the places of the old ones if necessary at the autumn filling of the beds. The first seven kinds,

mentioned below, are increased by division of the roots ; the remainder by cuttings put in after flowering :—

Hepatica triloba, red, blue, and white varieties ; the two first colours also double.

Primula vulgaris (Primrose), double white, yellow, buff, lilac, and crimson.

Bellis perennis (Daisy), double, of various colours.

Eranthis hyemalis, yellow.

Sanguinaria canadensis, white.

Anemone, apennina, blue.

A. nemerosa flore pleno, white.

Veronica saxatilis, blue.

Arabis alpina, white.

Alyssum saxatile, yellow.

Aubrietia deltoidea, purple.

Viola tricolor (Pansy), various colours.

WALLFLOWER.—To these may be added the double Wallflower (*Cheiranthus Cheiri*), of which there are pale yellow, and deep blood-coloured varieties ; these, however, attain a height of two feet.

ANNUALS.

Many annual flowers have very beautiful blossoms, but for the most part they are liable to the same objection as the spring flowers before mentioned. Sown in autumn, or as early in February as the season will permit, one sort in a bed, all those named in the first part of the following descriptive list will be in perfection between the middle of May and the middle of July ; and

as the different kinds successively lose their beauty, they must be rooted up and the beds be dug and replanted with some suitable plants from pots. All are raised from seeds, and a few, as indicated, can also be increased by cuttings potted in the usual way.

Nemophila insignis, trailing habit, flowers blue and white.

N. maculata, trailing, white, with blue spots.

Leptosiphon androsaceus, } 6 to 9 inches high, different

L. densiflorus, } shades of lilac.

Gilia tricolor, trailing, pale blue and white; there is also a white variety.

Collinsia bicolor, 1 foot, blue and white.

Lupinus nanus, 1 foot, blue and white.

L. Hartwegianus, 2 feet, blue and white.

Clarkia pulchella, 1½ feet, red; also a white variety.

Eucharidium grandiflorum, 1 foot, red.

Viscaria oculata, 2 feet, pink, with dark eye.

Sanvitalia procumbens, trailing, yellow.

Erysimum Perofskianum, 1½ feet, orange.

Delphinium Ajacis (Larkspur), 1 foot, various colours.

Schizanthus pinnatus humilis, 1½ feet, variegated.

The following kinds bloom later, and are suitable for succeeding spring-flowering bulbs. *Tagetes pinnata* and the French Marigold will continue to flower through the summer and autumn; so likewise will most of the others in this division if they are not sown till the end of May.

Reseda odorata (Mignonette), trailing, grown for its fragrance.

Zinnia elegans, 2½ feet, various colours.

Coreopsis Drummondii, 2 feet, yellow.

Phlox Drummondii, 1½ feet, various colours; cuttings potted in Autumn.

Tagetes pinnata, 1½ feet, yellow.

Tagetes patula (French Marigold), 1½ feet, red and yellow ; the double varieties by cuttings potted in autumn.

Tagetes erecta (African Marigold), 2 feet, orange and lemon ; cuttings of the double varieties should be preserved in pots.

Callistema hortense (China Aster) 1½ feet, various colours.

Mathiola annua (Ten-week Stock) 1 foot, various colours.

Calliopsis tinctoria, 2½ feet, yellow and brown.

BULBOUS AND TUBEROUS PLANTS.

Bulbous and tuberous plants are valuable auxiliaries to the gardener. Some of these, as the *Ranunculus*, *Tulip*, &c., require special treatment to grow them in a superior manner ; but as in flower-gardening the aim is to obtain beauty in the mass rather than individual perfection, the directions we shall give will be found quite sufficient for the general management of this tribe. In the culture of these plants the one great point to be attended to is the development and preservation till maturity of healthy foliage, for upon this depends essentially the vigour and beauty of the next season's bloom. On this account, early flowering bulbs are rather troubl'esome to manage when bedded ; for as the leaves endure long after the flowers have faded, either the beds must remain flowerless until the bulb-leaves naturally die, or the roots must be taken up and planted elsewhere immediately after the bloom is over, so that the beds might be refilled with some established plants from pots which will quickly come into flower.

SNOWDROP.—First in the order of time comes the Snowdrop (*Gulanthus nivalis*), which, with its associate the Crocus, is usually seen forming small patches along the front of mixed flower borders. If some of these patches are taken up as early in autumn as practicable, and the bulbs which compose them are planted singly about two inches apart, and rather less in depth, in some of the smaller beds, their pretty white blossoms will wonderfully enliven the dreary aspect of the flower-garden in the early spring months. Seeds of some small annual, such as the *Nemophila*, *Leptosiphon*, or *Gilia* before mentioned, may be scattered amongst the Snowdrops in February; and when the bloom of these is over, bulbs and all should be dug up and the beds planted a third time with some suitable autumn flower.

CROCUS.—On account of its gaiety and diversity of colour, the *Crocus* ought to be largely employed in spring gardening. Botanists make many species, which it is not necessary to enumerate here, the varieties sold in the seed-shops being sufficient for our purpose. Yellow, light blue, dark blue, purple, white, and striped flowers can be obtained separately, and may be mixed in planting or kept separate according to fancy. Some of the choicer sorts are distinguished by trivial names, but these are too costly for bedding. As the bulbs begin to vegetate early, they ought to be in the ground by the middle of October at latest, when they will bloom

in February and March. If it be intended to remove them immediately after flowering, three inches apart is a proper distance to plant, and they should not be covered deeper than two inches; but if permanent Crocus beds are desired the bulbs must in the first instance be given more space, six inches each way at the least, to allow of other plants being inserted between them after their bloom is over.

THE HYACINTH (*Hyacinthus orientalis*) is universally admired for its extreme beauty and delicious fragrance. To obtain this lovely flower in perfection, a little extra expense will hardly be grudged, as no plant more gratefully repays liberal treatment. In the beginning of October, then, dig out the soil to the depth of twelve or fifteen inches from the beds about to be planted, spread four or five inches of good rotten manure (old cow-dung is best) over the bottom, and return the surface soil. If this is heavy, some leaf-mould and sharp sand well incorporated with it will be beneficial. Plant from the middle to the end of October, eight inches apart, and four inches deep if the bulbs are strong; if otherwise, six inches asunder and three inches deep will be better. Each bed might be composed of one colour, or all the colours mixed in one bed, according to the taste or convenience of the cultivator. The bulbs will soon vegetate; and if severe frost sets in, a covering of fern or leaves should be laid upon the beds

by way of protection, but only during the frost. Stir the surface of the soil in spring without damaging the leaves; and if frosty nights occur, it will be advantageous to the plants to protect them by means of mats, supported over the beds upon arched sticks. As the flower stems advance, tie them loosely but neatly to small sticks, or the weight of the blossoms will cause the stems to lean in all directions, and thus spoil the symmetry of the beds. The plants will generally commence flowering early in April, and will continue through that month, and for some time in May. When the foliage becomes yellowish, the bulbs ought to be taken up and gradually dried till the fibrous roots wither; then they must be stored in a dry room till the next planting season. Hyacinths are annually imported from Holland in great variety; and we subjoin a list of good sorts, which can be purchased in the seed-shops for from 6s. to 9s. a-dozen: novelties, and the very best varieties are, of course, dearer:—

*Double Blue.**A la Mode.**Boquet Pourpre.**Duc de Normandie.**Globe Terrestre.**Pasquin.**Passetout.**Agate Nouvelle.**Comtesse de Salisbury.**Lord Wellington.**La Bien Aimee.**Koning Assingaris.**Robin Hood.**Double Red.**Acteur.**Boquet Royale.**Herstelde Vrede.**Flos Sanguineus.*

Comtesse de la Coste.
Groot Vorst.
Madame Zoutman.
Waterloo.

Panorama.
Marie Louise.
Bouquet Tendre.
Hugo Grotius.

Single Red.

Atmable Rosette.
L' Eclair.
Mars.

Charlotte Marianne.
L' Amie du Cœur.
Paix d' Amiens.

Single Blue.

Emicus.
Fulcan.
Haller.

Le Plus Noir.
Nimrod.
Orondates.

Single Yellow.

Heroine.
La Belle Jaune.

Poudre d' Or.

Double White.

Anna Maria.
Don Gratuit.
Minerva.
Ne plus ultra.
Sphæra Mundi.
Sultan Achmet.

Virgo.
Blanchefleur.
Couronne Blanche.
La Vestale.
La Deesse.
Triumph Blandina.

Single White.

Grand Vainqueur.
La Candeur.
Voltaire.

Reine d' Holland.
Prince de Galitzin.
Madame Talleyrand.

Double Yellow.

Bouquet d' Orange.
Gloria Florum.
Grand Monarque.
L' Or Vegetable.
La Favorite.

Louis d' Or.
Ophir.
Chrysolora.
Pyramide Jaune.

RANUNCULUS *Asiaticus* is another lovely flower, which unfortunately is so capricious, that in many situations, it cannot be grown in even a moderate degree of perfection. Florists recommend for this plant a loamy soil, well enriched with rotten cow-dung, which ought to be fully two feet in depth. Plant in February, four to five inches apart, according to the strength of the tubers, and cover one and a-half inch deep. After the leaves appear in April, the surface of the bed should be lightly stirred, and a slight covering of sand spread evenly over it. This will act beneficially upon the plants, by preventing the drought from penetrating; but if very dry weather makes watering imperative, use soft water, give it copiously once or twice in the evening, and next day stir and level the surfacing of sand. As the blossom buds advance, they must be protected from the sharp night frosts which sometimes occur in May; and when the bloom is in its beauty in June, a slight shading during hot sunshine will assist in prolonging it. The plants must not be disturbed till the foliage begins to die, when the roots should be taken up, and gradually dried in the shade.

Innumerable varieties have been produced by professed florists, from whom good mixtures can be purchased for from 7s. to 21s. a-hundred, according to quality—the named sorts are much dearer. For the flower-garden, a class called the Turban Ranunculus is

well adapted, of which yellow, orange, scarlet, and crimson colours can be obtained separately at an average price of 3s. 6d. per hundred.

ANEMONE *coronaria* is a tuberous-rooted species, of which there are numerous varieties, both double and single. The double kinds, however, rank among "florists' flowers;" and the treatment proper for the *Ranunculus* is equally adapted for them. The single sorts are better for flower-garden beds, because they are quite as effective in the mass, and less troublesome to cultivate. Planted in October, they will flower in April and May; planted in March, they will last nearly through the summer; and if put in soon after Midsummer, a good display of autumn bloom may be looked for. After making the surface smooth, select sound roots of an uniform size, and set them from four to five inches asunder all over the bed, taking care to place the crown of the tuber upwards; then cover them an inch and a half deep with light soil. All the after culture necessary, is to pull up weeds as they appear, and to stir the surface of the soil occasionally. If after the bloom is over in May, or the beginning of June, it should be requisite to fill the beds again with some other kind of flower, the Anemones must be very carefully taken up and planted with all their fibrous roots attached; for it is of great importance that the leaves are retained in health till they die naturally, after

which the roots must be taken up and dried like others of their class. To increase your variety of colours, and maintain a good stock of plants, a bed of seedlings ought to be raised annually. Mark the best flowers while in bloom, and watch narrowly for the seed as it ripens; for as each has a feathery appendage attached, it is very apt to be carried away by the wind. When the seed is gathered in autumn, it should not be sown till the following spring; but if obtained in the early part of summer, it might be sown immediately, previously rubbing it well between the hands with some sand or dry soil intermixed, in order to separate the seeds from each other. Sow thinly, cover lightly, and keep the ground free from weeds; in the course of the second season most of the plants will blossom, when the worst should be discarded, and the best left undisturbed till the leaves wither, then to be taken up and dried like old plants. Another tuberous-rooted species of *Anemone*, called *hortensis*, has gay flowers, of various colours, and is well worthy of cultivation. It will succeed under the treatment above detailed.

TULIPS.—The Tulip has been aptly designated the “Peacock of Flowers,” for it has no equal in gaudiness—a result to be expected, when it is known to have enlisted the fostering care of florists for more than two centuries and a half. At one period, the Tulip became the subject of a gambling mania, when par-

ticular kinds are said to have brought enormous prices; even now, some choice sorts are very costly, but these come only within the province of the professed florist; and the varieties suitable for a general flower-garden can be obtained at a moderate expense. The following early sorts bloom towards the end of April, and are among the best for bedding :—

Single Tulips.

- Keiser's Kroon*, scarlet and yellow.
- Belle Alliance*, red.
- Bride of Haarlem*, crimson and white.
- Alida Maria*, rose and white.
- Superintendent*, white and violet.
- White Swan*, white.
- White Pottebakker*, white.
- Yellow Pottebakker*, yellow.

Double Tulips.

- Tournesol*, red and orange.
- Rex Rubrorum*, crimson.
- Conqueror*, white and violet.
- La Candeur*, white.
- Duc van Thol*, red and yellow, dwarf.
- Double Yellow*, yellow, flowers later.

Another class is called the Parrot Tulip. Some of these are very striking in appearance, having curiously bizarred colours, and deeply jagged petals. Several distinctly marked varieties may be obtained for 1s. 6d. a-dozen.

The Tulips cultivated by florists are varieties of

Tulipa Gesneriana, which flower two or three weeks later than the preceding. If these are desired for the flower-garden, a mixed lot should be procured, which may be purchased from 10s. a-hundred upwards; but for our purpose, they are inferior to those before named.

No very special treatment is requisite for growing the foregoing sorts in a satisfactory manner. To obtain a vigorous bloom, good soil is of course necessary, but that common to the flower-garden beds will suffice, if other plants have been found to thrive in it; although it would be advantageous to trench the beds two spits deep, adding some rotten dung immediately their previous occupants have been removed in autumn. Early Tulips ought to be in the ground by the middle of October, yet if the soil happens to be very wet about that time, planting had better be deferred a week or so; for ground, especially if recently trenched, ought not to be disturbed or trampled upon when in a wet condition, if possible to avoid doing so. Set the bulbs six inches asunder, covering the largest four inches deep, and the smaller ones three inches. The leaves will appear in February, when they will need protecting from frosts in the manner mentioned when treating of the Hyacinth. As the bulbs ought not to be taken up till the leaves wither, which will not be before July, annuals might previously be planted with a dibble between the Tulips; and at the proper time the latter can be dug

out without injuring the other plants. It must be remembered that all bulbs, and Tulips more particularly are injured by being dried in the sun.

IRIS:—Two species of bulbous-rooted Iris (*I. xiphium* and *I. xiphioides*) have been subjected to the skill of florists, by whom many beautiful kinds have been raised. Fifty distinct varieties of each species can be bought for 2*l.*, which number will be enough to make a moderate-sized bed of each. *I. xiphioides*, or the English Iris, has larger and handsomer flowers than *I. xiphium*, or the Spanish Iris, although the latter is very showy. As they do not blossom before June, and as it is not necessary to take the bulbs out of the ground every season, a crop of autumn or early-spring sown annuals might occupy the same beds; and after the bloom of the Iris is past, another set of plants for autumn flowering can be planted between them. It is best, however, to take the Iris up every third year, when the bulbs should be dried and parted, planting them again in September in other beds, a foot apart (if the foregoing system is adopted), and four inches deep. New varieties are likely to be obtained by raising seedlings; but neither this nor any other bulb should be allowed to ripen seed, unless it is wanted for propagation, as that process considerably weakens the roots. Pick off the seed-vessels, therefore, as soon as they are formed, leaving the stalks to wither with the leaves.

NARCISSI.—Other very interesting beds might be formed of the early flowering Narcissi—that is, such as blossom in March and April—these being preferable to the later ones, if other plants are intended to be put between the Narcissi to furnish flowers through the after-months in the manner previously described. In such case, the Narcissi must be allotted more space than would otherwise be required ; and to produce an effect, the first year three bulbs of the same sort might be planted in a patch, thus . . . , such patches to be fifteen or eighteen inches from each other, and the bulbs covered three to four inches deep, according to their size. These patches might remain undisturbed till, from the accumulation of bulbs, it becomes necessary to take them up in order to reduce them, when the situation had better be changed. The subjoined list contains the prettiest and most distinct of the early bloomers, all of which we have thought it advisable to retain under the old generic name of *Narcissus*, notwithstanding its division into a whole host of genera by some modern writers on Botany :

N. pumilus, yellow, $\frac{1}{2}$ foot, March.

Telamonius plenus, yellow, 1 foot, March—April.

semipartitus, yellow, 1 foot, March—April.

aurantius plenus, yellow, 1 foot, March—April.

conspicua, yellow, $\frac{1}{2}$ foot, March—April.

parvulus plenus, yellow, 1 foot March—April.

Campernellii, yellow, 1 foot, March—April.

cernuus, white, 1 foot, March—April.

albicans, white, 1 foot, March—April.

montanus, white, 1 foot, April.

ornatus, white, 1 foot, April.

spatulatus, white, 1 foot, April.

If later blooming kinds are preferred, those termed the Polyanthus Narcissus should be chosen, which, having several flowers on a stem, are still more showy than the early sorts ; and, with the single and double Jonquils for a marginal-row, would make a fine bed. These flower in May or the beginning of June, and can be procured at a moderate cost in the seed shops, under the following names :—

Grand Monarque, white and citron.

New Grand Primo, yellow and orange.

Soleil d'Or, yellow and orange.

States General, pale citron.

Plutarchus, white and yellow.

Morning Star, white and orange.

GLADIOLUS, another bulbous genus, contains some surpassingly handsome flowers, most of the finest of which have been originated within the last few years by cross impregnation, beginning with only two or three natural species, whose flowers are of vivid and distinct colours. These new varieties, however, are for the most part too expensive to plant in quantities, but the three following fine sorts can be bought for from one to six shillings a dozen, and will be as effective in masses as any of the more costly ones ;—

G. cardinalis, scarlet with white spots; *oppositiflorus*, whitish with pink stripes; *natalensis*, a curious mixture of yellow and red. Each of these sorts should occupy a bed, unless with the last named a few bulbs of *Gandavensis* are mixed. A root or two of each of the following kinds, the colours of which are varied and brilliant, might be associated in a fourth bed, if required; — *ramosus*, *insignis*, *formosissimus*, *speciosissimus*, *multiflorus*, *Village Maid*, *Leopoldina*.

Some of the species are said to bear our winters with impunity after they get well established, if protected by a covering of leaves, but the safest plan is to take them up every season after the foliage dies, and to plant them in small pots in autumn, ready for turning out into the beds in February. Those that do not commence growing in autumn can be wintered in any dark place out of the reach of frost, but any that put forth shoots must be kept under glass. The plants are said to bloom stronger when potted in autumn, than when kept out of the ground all winter. As the flowers will not appear before the end of July, seeds of some upright growing annual, such as China Aster, Larkspur, &c., should be sown thinly over the bed, and raked in after planting the bulbs, which on this account ought to be placed nine or ten inches apart; the annuals will then, if properly thinned, have sufficient space to grow and flower without injuriously crowding the Gladioli.

THE MARVEL OF PERU (*Mirabilis Jalapa*) is a useful plant for large late beds. It grows $2\frac{1}{2}$ to 3 feet high, and is of various colours,—white, red, yellow, and striped. The large tuberous roots must be taken up and wintered in some place secure from frost, such as a cellar, where they should be partly covered with sand or mould to prevent their shrivelling. If potted in spring, instead of being planted out, this plant might be employed for a second filling of Hyacinth or Tulip beds, as it would then come into bloom about August.

THE TIGER-PLANT (of which there are two species, *Tigridia pavonia*, and *T. conchiflora*) presents us with splendid flowers, which unfortunately are so fugacious that each endures only a single day; however, they possess the merit of appearing in succession, so that a small bed of either kind, or of both mixed, will be attractive throughout their blooming season of several weeks, commencing about Midsummer. Both kinds grow the same height (15 to 18 inches); in fact, the only difference between them is in colour, the first being orange-red spotted with brown, and the second deep yellow, marked in a similar way. The bulbs will not bear the cold and wet of winter in the open ground, therefore they must be taken up when the tops have been killed by the first frosts of autumn. They should not be dried, but set thickly in large pots, or boxes of earth, and they may be wintered in a cellar with the

roots of Dahlias, Marvel of Peru, &c., if the soil that surrounds them is not moist enough to rot the bulbs. They may either be planted in the beds in March, or grown singly in pots till some spring-flowering plants have been cleared off, and then be turned out. Seedlings will bloom the second year, and when both species are grown together, intermediate varieties are sometimes obtained from seed.

DAHLIA.—No flower excels, if any equals, the Dahlia in magnificence; nor has any flower been more improved by cultivation since the introduction of the first single species from Mexico in 1789. The first step in improvement was the production from seed of what is termed a *double* Dahlia, and since that era in its history countless numbers have been raised, each year furnishing some new varieties, that surpass all that preceded them in beauty, till at the present time some of the leading sorts make a near approach to perfection. In addition to the beautiful *sels*, or one-coloured flowers, a new class, called *fancy* Dahlias, has recently become popular. Many of these are exceedingly striking in effect, each flower being composed of two distinct colours, the petals in some varieties being striped, in others tipped. Being a tall and robust plant, ranging in height from three to six feet, the Dahlia is ill-adapted for a geometrical flower-garden, except indeed for a large central bed; but for a bed, or group

of beds, to be viewed at a distance, it has no equal during the autumn months.

The first frost is generally severe enough to destroy the flowers and foliage, and after this occurs, the stems should be cut off, the roots taken out of the ground, carefully labelled, and laid in a dry place for a few days in an inverted position; they will then be in a fit condition to store for the winter months in some place to which frost has no access. In the end of March the large roots may be divided into several, if necessary, by cutting through the crown with some sharp instrument, remembering that a small piece of the crown must be attached to every bundle of fleshy fibres, that and no other being the part from which shoots are emitted; the roots may then be planted in the places where they are to bloom, putting the crowns about two inches below the surface. Or if a great number of plants are wanted, pot the roots in February, place them in heat, and as the young shoots are put forth in succession, take them off, when from two to three inches long, with a small slice or heel of the tuber attached, and pot them singly in No. 60 pots, keeping them in a close and warm frame for a few weeks till they have made roots, when they should be removed to a more airy place, and gradually hardened by exposure in fine weather. Planted out in the middle of May, these young plants will make large

bushes, and blossom liberally in the autumn. The following lists comprise some of the best flowers of the present time, omitting the new and high-priced ones. It should here be observed that the heights appended to the different sorts are not absolute, but are liable to considerable variation according to the richness of the soil, the strength of the plant, and other circumstances.

TWENTY-FOUR GOOD DAHLIAS.

- Collison's Andromeda*, buff, with pink tip, height 4 feet.
- Sainsbury's Beeswing*, ruby, 3 feet.
- Turner's Berryer*, dark maroon, 4 feet.
- Girling's Boule de-Feu*, bronze scarlet, 4 feet.
- Girling's Captain Warner*, crimson, 3 feet.
- Girling's Crocus*, pale yellow, 3 feet.
- Brown's Captivation*, shaded dark, 3 feet.
- Heale's Empress of Whites*, white, 3 feet.
- Turvill's Essex Triumph*, maroon, 4 feet.
- Hodges's Imbricata*, purple, 5 feet.
- Brown's Lady St. Maur*, white, tipped with lavender, 4 feet.
- Turner's Louis Philippe*, crimson, 4 to 5 feet.
- Whale's Marchioness o Cornwallis*, blush, 4 feet.
- Sealy's Marquis of Worcester*, white, tipped with pink, 4 feet.
- Turner's Miss Vyse*, white, tipped with purple, 3 feet.
- Girling's Mrs. Anderson*, pale lilac, 5 feet.
- Prockter's Nonpareil*, red, 3 feet.
- Turner's Privateer*, yellow, tipped with red, 3 feet.
- Widnall's Queen of Roses*, shaded rose, 3 feet.
- Collison's Shylock*, scarlet, 3 feet.
- Keynes's Standard of Perfection*, rosy crimson, 3 feet.
- Batteur's Toison d'Or*, pale buff, 3 feet.

Keynes's Yellow Standard, yellow, 3 feet.

Turner's Scarlet Gem, scarlet, 3 feet.

TWELVE FANCY DAHLIAS.

Morot's Dulcinée, lilac with white stripe, height 4 feet.

Deegen's Emelie Lehmann, rosy scarlet, with white tip, 4 feet.

Huidoux's Empereur de Maroc, maroon with white tip, 3 feet.

Sieckmann's Freund Schmidt, red, tipped with white, 4 feet.

Girling's Jenny Lind, maroon and white, 2 to 3 feet.

Wachy's Madame Wachy, purple, tipped with white, 2 feet.

Jeffrey's Master George Clayton, white and purple, 4 feet.

Paris's Œillet Parfait, orange, striped with red, 4 feet.

Paris's Picotee, yellow, striped and spotted with red, 4 feet.

Girling's Remembrancer, rose and white, 3 feet.

Dubras's Vicomte de Ressequier, purple and white, 5 feet.

Ressequier's Adolph Dubras, nankeen, with white tip, 3 feet.

In the foregoing enumeration of plants proper for massing, we have thought it unnecessary to arrange them under the separate heads of hardy herbaceous plants, shrubby plants, and so forth, deeming it more convenient to group the whole under the general term—bedding plants, and to mention the peculiar characteristics of each plant when treating of it individually. Such of them as are not stated to be hardy, will of course require the protection of glass during winter; however, those persons who do not possess glass structures, may maintain a very respectable flower-garden by means of the hardy herbaceous plants, bulbs, and annuals we have described, for which reason a greater

number have been noticed than are generally required for a flower-garden, where such plants as Verbenas, Geraniums, Petunias, &c., are largely employed.

For a flower-garden, in the natural style, (p. 36) hardy herbaceous plants, bulbs, &c., are to be preferred, the object here being rather to produce a pleasing succession of flowers by the intermixture of various kinds, than to make a gorgeous display by means of masses of vivid colours. Nevertheless, any of the plants previously mentioned, may, if desired, be set singly in the mixed beds of a natural flower-garden, and in addition those enumerated in the following lists are handsome and of easy culture. The height of the plants, it must be remembered, will be considerably modified by the quality of the soil they grow in, by the dryness or wetness of the weather, and by other circumstances ; so likewise will the period of flowering be hastened or retarded by the character of the season. The management of such plants is very simple. At the spring annual digging of the beds or borders, any overgrown root-stocks of herbaceous plants should be reduced in size, and that is also the time to make improvements in the arrangement. For example, if a plant which is found to grow three feet high, is situated nearer the margin of the bed than another that only attains a height of two feet, their positions ought to be reversed ; or if two plants of the same

colour which bloom at the same period stand near each other, one of them ought to be removed.

Daffodils, Lilies, Crown Imperials, and other bulbous plants, which do not require taking out of the ground annually, will in the course of time grow into large unsightly bunches, in which case they must be taken up when dormant, divided and re-planted. Biennial plants should be raised from seed in some other place, and removed to the beds in autumn after the annuals, &c., are cleared away. Annuals may be sown in March or April, in small patches between the other plants; or they can be raised in some warm situation and transplanted when large enough. It is also a good plan to sow the more hardy sorts about the first of September, and those plants which survive through the winter can be transferred to the beds and borders after these are dug in spring. As their season of flowering depends essentially upon the time when the seeds are sown, that part is omitted in the following list of annuals at page 134.

PERENNIAL BORDER-FLOWERS.

<i>Botanical Name.</i>	<i>English Name.</i>	<i>Colour.</i>	<i>Height.</i>	<i>Time of Flowering.</i>
<i>Helleborus niger</i> . . . }	(Christmas Rose)	white	$\frac{1}{2}$ foot	Jan.—Feb.
<i>Viola odorata plena</i> . .	(Violet)	blue	trailing	Mar.—April
<i>V. odorata alba plena</i> . .	—	white	trailing	Mar.—April
<i>V. striata</i>	—	blue & wh.	$\frac{1}{2}$ foot	June—July
<i>Veronica orientalis</i> (Speedwell)		pale blue	trailing	June—July
<i>V. incarnata</i>	—	flesh col.	1 foot	July—Aug.

Botanical Name.	English Name.	Colour.	Height.	Time of Flowering.
<i>Monarda didyma</i>		red	2 feet	July—Aug.
<i>Iris graminea</i>		variegated	1½ foot	June
<i>Crucianella stylosa</i> (Crosswort)		pink	trailing	June—Aug.
<i>Anchusa italica</i> (Bugloss)		blue	3 feet	June—Aug.
<i>Omphalodes verna</i>		blue	½ foot	Mar.—April
<i>Primula elatior</i> } (Polyanthus)		various	½ foot	Mar.—May
<i>polyantha</i>				
<i>P. auricula</i> (Auricula)		various	½ foot	April—May
<i>P. vulgaris</i> (Primrose)		various	½ foot	Mar.—April
<i>Dodecatheon</i> } (American cow-)		red	1 foot	April—May
<i>Meadia</i> (slip) }				
<i>Lysimachia verti-</i> } (Loose strife)		yellow	1½ foot	July—Aug.
<i>cillata</i> }				
<i>Campanula pulla</i> (Bell-flower)		blue	½ foot	June—July
<i>C. pumila</i> —		blue	½ foot	June—July
<i>C. pumila alba</i> —		white	½ foot	June—July
<i>C. persicifolia flore</i> } —		blue	2 feet	July—Aug.
<i>pleno</i> }				
<i>C. p. flore albo pleno</i> —		white	2 feet	July—Aug.
<i>C. pyramidalis</i> —		blue	5 feet	Aug.—Sept.
<i>Veratrum nigrum</i>		blood	5 feet	July—Aug.
<i>Asclepias tuberosa</i> (Swallow wort)		red	2 feet	July—Aug.
<i>Gentiana asclepiadea</i> (Gentian)		blue	1 foot	July—Aug.
<i>G. acaulis</i> (Gentianella)		blue	½ foot	April—May
<i>Statice latifolia</i> (Sea lavender)		blue	1½ feet	June—July
<i>Funkia subcordata</i>		white	1 foot	August
<i>Polygonatum</i> } (Solomon's seal)		white	2 feet	May—June
<i>vulgare</i> }				
<i>Convallaria</i> } (Lily of the valley)		white	½ foot	May—June
<i>majalis</i> }				
<i>Enothera fruticosa</i>		yellow	2 feet	July—Aug.
<i>E. speciosa</i>		white	2 feet	June—Aug.
<i>Saxifraga granulata</i> } (Saxifrage)		white	1 foot	April—June
<i>plena</i> }				
<i>S. umbrosa</i> (London pride)		pink	1 foot	May—June
<i>Dianthus caryo-</i> } (Carnation)		various	2 feet	June—July
<i>phyllus</i> }				
<i>D. hortensis</i> (Pink)		various	1 foot	June—July
<i>Lychnis chalcidonica plena</i> . .		red	2½ feet	June—July
<i>L. fulgens</i>		scarlet	1 foot	June—July
<i>Lythrum Salicaria</i> (Willow herb)		red	3 feet	July—Aug.
<i>Spiraea aruncus</i> (Goat's beard)		white	4 feet	July—Aug.
<i>S. filipendula pl. na</i> (Dropwort)		white	1½ foot	July—Sept.
<i>Potentilla formosa</i>		red	1½ foot	June—July
<i>P. Hopwoodiana</i>		wh. & red	2½ feet	June—July

Botanical Name.	English Name.	Colour.	Height.	Time of Flowering.
<i>P. Garnieriana</i>		yell. & red	2 feet	June—July
<i>P. Mayana</i>		crimson	2½ feet	June—July
<i>Geum coccineum</i>	(Avens)	red	2 feet	June
<i>Papaver orientale</i>	(Poppy)	orange red	3 feet	June
<i>P. bracteatum</i>	—	deep red	4 feet	June
<i>Delphinium meso-</i> <i>leucum</i>	(Larkspur)	blue & wh.	5 feet	July—Aug.
<i>D. azureum</i>				
<i>D. chinense</i>	—	light blue	6 feet	July—Aug.
<i>Aconitum variegatum</i> (Aconite)		blue	2 feet	July—Sept.
<i>Aquilegia vulgaris</i> (Columbine)		blue & wh.	4 feet	July—Aug.
<i>A. glandulosa</i>		various	2½ feet	May—July
<i>A. canadensis</i>	—	blue & wh.	2 feet	May—June
<i>Ænemone Pulsatilla</i>		red & or.	2 feet	May
<i>A. vernalis</i>		deep blue	½ foot	April—May
<i>Adonis vernalis</i>		white	½ foot	April
<i>Ranunculus aconitifolius flore</i> <i>pleno</i>	(Pilewort)	yellow	1 foot	Mar.—Apr.
<i>R. acris flore pleno</i>				
<i>Ficaria ranuncu-</i> <i>loides pleno</i>	(Pilewort)	white	1½ foot	May—June
<i>Trollius asiaticus</i> (Globe flower)				
<i>Caltha palustris</i> { Marsh mari- } <i>flore pleno</i> { gold . . . }		yellow	½ foot	April—May
<i>Dracocephalum</i> { (Dragon's head)		orange	1 foot	May—June
<i>speciosum</i>		yellow	1½ foot	May
<i>D. argenteum</i>		pink	2 feet	July—Aug.
<i>Melittis grandiflora</i>		blue	1 foot	July—Aug.
<i>Peutstemon digitalis</i>	(Bastard balm)	variegated	1 foot	May
<i>P. ovata</i>		white	3 feet	July—Aug.
<i>P. Scouleri</i>		blue	2½ feet	June—July
<i>Acanthus spinosus</i> (Bear's breech)		blue	2 feet	June
<i>Mimulus moschatus</i> (Musk plant)		blue & wh.	3 feet	July—Sept.
<i>Cheiranthus oehro-</i> <i>leucus</i>	(Wallflower)	yellow	½ foot	July—Sept.
<i>Cordamine pratensis</i> { Lady's } <i>plena</i> { smock }		pale yellow	½ foot	Apr.—June
<i>Geranium striatum</i> (Crane's bill)		French w.	1 foot	April—May
<i>G. sanguineum</i>		streaked	1 foot	May—Sept.
<i>Ononis rotundi-</i> <i>folia</i>	(Rest-harrow)	dark red	1 foot	June—Sept.
<i>Lupinus polyphyllus</i>	(Lupine)	pink	1½ foot	May—July
<i>L. ornatus</i>		blue	2½ feet	June—July
<i>Orobis vernus</i>	(Bitter vetch)	blue	2½ feet	June—July
		purple	1 foot	Mar.—April

Botanical Name.	English Name.	Colour.	Height.	Time of Flowering.
<i>Liatris scariosa</i>		blue	2 feet	Aug.—Sept.
<i>Aster Novæ Angliæ</i>	(Starwort)	blue	6 feet	Sept.—Oct.
<i>A. grandifloras</i>	—	blue	2½ feet	October
<i>A. elegans</i>	—	blue	3 feet	Aug.—Sept.
<i>Helianthus multi- florus plenus</i>	(Sunflower)	yellow	5 feet	Aug.—Oct.
<i>Rudbeckia purpurea</i>		purple	5 feet	July—Sept.
<i>Coreopsis grandiflora</i>		yellow	3 feet	Aug.—Sept.

BIENNIAL BORDER-FLOWERS.

Botanical Name.	English Name.	Colour.	Height.	Time of Flowering.
<i>Mathiola simp- plicicaulis</i>	(Brompt. stock)	red	2 feet	May—June
<i>M. incana</i>	(Queen's stock)	various	1½ feet	May—June
<i>Verbascum pyrami- datum</i>	(Mullein)	yellow	4 feet	July—Aug.
<i>V. Blattaria album</i>	—	white	4 feet	July—Aug.
<i>Hedysarum coronarium</i>		red	3 feet	June—July
<i>Oenothera grandiflora</i>		yellow	2 feet	May—July
<i>Campanula pul- cherrima</i>	(Bell flower)	blue	1 foot	June—July
<i>Echium viola- ceum</i>	(Viper's Bugloss)	blue	2½ feet	July—Aug.
<i>Scabiosa atro- purpurea</i>	(Sweet scabious)	various	3 feet	June—Aug.
<i>Agrostemma coronaria</i>	(Rose campion)	rd. pk. & wh. var. }	3 feet	June—Aug.
<i>Althæa rosea</i>	(Hollyhock)	various	6 to 8 ft.	July—Sept.
<i>Digitalis purpurea alba</i>	(Foxglove)	white	4 feet	July

ANNUAL BORDER FLOWERS.

Botanical Name.	English Name.	Colour.	Height.
<i>Collinsia grandiflora</i>		blue	1 foot
<i>Eutoca viscida</i>		blue	1½ foot
<i>Collomia coccinea</i>		red	1½ foot
<i>Iberis umbellata</i>	(Candy-tuft)	white	1 foot
<i>Calendula pluvialis</i>	(Marigold)	wh. & pur.	1½ foot
<i>Nemophila atomaria</i>		speckled	

BULBOUS-ROOTED BORDER-FLOWERS.

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Botanical Name.	English Name.	Colour.	Height.
<i>Impatiens glanduligera</i>	(Balsam)	red	4 feet
<i>Gilia capitata</i>		blue	2 feet
<i>Lupinus luteus</i>	(Lupine)	yellow	2 feet
<i>L. mutabilis</i>		blue & wh.	4 feet
<i>Convolvulus tricolor</i>	(Bindweed)	blue & wh.	
<i>Dianthus chinensis</i>	(Indian pink)	various	1 foot
<i>Platystemon californicus</i>		pale yellow	trailing
<i>Malope grandiflora</i>		red	2 feet
<i>Hibiscus africanus</i>		{ white with dark throat }	1 foot
<i>Amarantus hypo-</i>	{ (Prince's		
<i>chondriacus</i>	feathers) }	blood	2 feet
<i>Helianthus annuus</i>	(Sunflower)	yellow	6 feet
<i>Centaurea mos-</i>	{ (Sweet sultan)		
<i>chata</i>		purple	2 feet
<i>C. suaveoleus</i>		yellow	1½ foot
<i>Clarkia elegans</i>		red	2 feet
<i>Lathyrus odoratus</i>	(Sweet-pea)	various	climber
<i>Tropæolum pere-</i>	{ (Canary-bird)		
<i>grinum</i>		yellow	climber
<i>Convolvulus major</i> ?		various	climber

BULBOUS-ROOTED BORDER-FLOWERS.

Botanical Name.	English Name.	Colour.	Height.	Time of Flowering.
<i>Erythronium dens canis</i>	{ (Dog's-tooth violet) }	reddish	½ foot	March
<i>E. dens canis albiflorum</i>		whiteish	½ foot	March
<i>Scilla bifolia</i>	(Squill)	blue	½ foot	Feb.—Mar.
<i>S. nutans carnea</i>		pink	½ foot	Mar.—May
<i>S. peruviana</i>		blue	1 foot	May—June
<i>S. p. — alba</i>		white	1 foot	May—June
<i>Ornithogalum um bellatum</i>	{ Star of Bethlehem }	white	½ foot	April—May
<i>O. pyramidale</i>		white	2 foot	June—July
<i>Fritillaria im-</i>	{ (Crown imperial)			
<i>perialis</i>		yellow	3 feet	April—May
<i>F. im. rubra</i>		red	3 feet	April—May
<i>F. meleagris</i>	(Fritillary)	speckled	1½ foot	April—May
<i>F. præcox</i>		white	1 foot	April—May

Botanical Name.	English Name.	Colour.	Height.	Time of Flowering.
<i>Leucojum pulchellum</i>	(Snow-flake)	white	1 foot	April—May
<i>Zephyranthes candida</i>		white	$\frac{1}{2}$ foot	Aug.—Sept.
<i>Sternbergia lutea</i>		yellow	$\frac{1}{2}$ foot	Aug.—Sept.
<i>Hyacinthus amethystinus</i>	(Hyacinth)	blue	$\frac{1}{2}$ foot	April—May
<i>Muscari moschatum</i>	(Musk hyacinth)	bl. & yel.	$\frac{1}{2}$ foot	April—May
<i>M. comosum</i> { <i>monstrosum</i> }	{ Feathered hyacinth }	blue	$\frac{1}{2}$ foot	April—May
<i>Colchicum autumnale</i> { fl. pl. }	{ (Saffron)	purple	$\frac{1}{2}$ foot	September
<i>Gladiolus communis</i>	(Corn-flag)	red	2 feet	June—July
<i>G. byzantinus</i>	—	red	2 feet	June—July
<i>Actis autumnalis</i>		white	$\frac{1}{2}$ foot	Aug. Sept.
<i>Lilium candidum</i>	(Lily)	white	4—5ft.	June—July
<i>L. tigrinum</i>	(Tiger lily)	{ orang. speck. with brown }	4—5ft.	July—Aug.
<i>L. martagon</i>	(Martagon)	purple	4 feet	June—July
<i>L. pyrenaicum</i>		yellow	4 feet	June—July
<i>Lilium chalcedonicum</i>		red	4 feet	June—July
<i>L. speciosum punctatum</i>		{ white speck. with pink }	6 feet	Aug.—Sept.
<i>L. sp. rubium</i>		{ white speck. with crim. }	5 feet	Sept.—Oct.
<i>L. sp. album</i>		white	4 feet	Sept.—Oct.

FLOWERING PLANTS SUITABLE FOR ROCK-WORK.

Armeria vulgaris
Achillea millefolium flore rubro
Achemilla alpina
Anthemis nobilis flore pleno
Gentiana verna
Helichrysum arenarium
Meconopsis cambrica
Saxifraga geum
S. ——— oppositifolia

Thymus citriodorus
Dianthus cæsius
D. ——— alpestris
Vinca major
Vinca minor
Sedum Sieboldii
Sempervivum tectorum
Veronica saxatile
Coronilla minima

Arabis saxatile
Gnaphalium dioicum
Linaria cymbalaria

Lysimachia nummularia
Epilobium alpinum
Alyssum saxatile variegatum.

FERNS SUITABLE FOR ROCK-WORK.

Polypodium vulgare
P. ——— calcareum
Osmunda regalis
Lomaria spicant
Scolopendrium officinarum
Ceterach officinarum

Asplenium ruta muraria
A. ——— trichomanes
A. ——— adiantum nigrum
Botrychium lunaria
Athyrium filix femina
Polystichum angulare.

AQUATIC PLANTS.

Nymphaea alba
Nuphar lutea
Alisma plantago
Butomus umbellatus
Hottonia palustris
Menyanthes trifoliata

Villarsia nymphaoides
V. ——— cordata
Sagittaria sagittifolia
Lysimachia thyrsiflora
Myriophyllum spicatum
Richardia ethiopica.

ORNAMENTAL SHRUBS AND SMALL TREES.

THE ROSE.

This favourite genus has become so prolific in varieties, that it has been found necessary to arrange them in classes, some of which, however, are very ill defined. Either standard or dwarf plants can be procured from any nurseryman, and, with the exception of the newest sorts, which are omitted here, at a moderate cost.

The China, Tea-scented, and Climbing Roses, propagate freely by cuttings; the other classes can also

be similarly increased, but being generally grown as standard trees, they then require to be budded on tall, straight stocks, which are to be procured from the woods and hedgerows in winter, and planted in rows in the reserve ground, at the same time heading them down to the required height. These stocks will emit side shoots in spring, all of which must be displaced, except two or three of the uppermost, which, if the stocks have been planted in good ground, will be large enough for bedding in July or August. The second spring—that is, in about two years from the planting of the stock, many of the trees will have formed head enough to justify their removal to the lawn or the flower-garden; the weaker ones are to be closely pruned and retained in the nursery another season.

PROVENCE ROSES. (*Rosa centifolia*.)

Cristata	rose-col. crested buds	Triomphe d'Abbeville	lt. crim.
Reine de Provence	lilac-rose	Duc de Choiseul	} mottled rose
Superb striped	} wh. striped pk.	ponctue	
Unique		Curled	veined rose

MOSS ROSES. (*Rosa centifolia muscosa*.)

White Bath	white	Lancel	deep rose
River's Princess	crim. pur.	Crimson	light crimson
Moussue presque partout	rose	Celina	crimson

HYBRID PROVENCE ROSES.

Blanche fleur	french white	Princesse Clementine	white
Comte	} cream ting. with fawn	Hypacia	{ bright red spotted
Plater		Enchanteresse	
Emerance	pale lemon		deep rose

HYBRID CHINA ROSES.

Chenedolé . . .	light crimson	Decandolle . .	crimson scarlet
Comtesse de La- cepede . . . }	silvery blush	Marjolin . . .	deep crimson
Coupe d'Amour . . .	pink	General Allard . . .	rosy red

HYBRID BOURBON ROSES.

Charles Duval . .	bright rose	Legouvé . .	purplish crimson
Coupe d'Hebé . .	bright rose	Paul Perras . .	shaded rose
Great Western . .	crimson red	Sylvain . . .	bright crimson

FRENCH ROSES. (*Rosa gallica*.)

Boula de Nanteuil .	crim. purple	Shakspeare .	bt. rose, red cent.
Columella	deep rose	Washington .	marbled crimson
Kean	scarlet	New Village Maid {	red, striped with white

ROSA ALBA.

Duc de Luxembourg {	flesh, rosy centre	Princesse de Lamballe .	white
Josephine Beauharnais,	pale flesh	Sophie de Marailly {	flesh, pink centre
La Séduisante . .	rosy blush	Attila	rosy crimson

DAMASK ROSES. (*Rosa damascena*.)

Chateaubriand . .	cherry red	Pope	crimson-purple
La Ville de Bruxelles .	{ bright rose	Lady Fitzgerald .	light crimson
Mdme. Zoutman .	cream colour	Semiramis {	rose, fawn-coloured centre

AUSTRIAN BRIARS. (*Rosa lutea*.)

Williams's Double Yellow		Persian Yellow
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CLIMBING ROSES.

AYRSHIRE ROSES. (<i>R. arvensis</i> .)	EVERGREEN ROSES. (<i>R. semper- virens</i> .)
Ayrshire Queen . purplish crim.	Donna Maria white
Queen of the Belgians . white	Princesse Louise . creamy blush
Ruga pale flesh	Banksiaeflora . white, yel. centre

ROSA MULTIFLORA.

Elegans	rose-colour	MACARTNEY ROSES.	
Russelliana .	purple-crimson	Maria Leonida	white
		Scarlet Maria Leonida .	bt. red

ROSA BANKSIE.

White Banksian

Yellow Banksian

AUTUMNAL ROSES.

HYBRID PERPETUAL ROSES.

Augustine Motchelet	deep crim.	Melanie Cornu	purplish crim.
Baronne Prevost	bright rose	William Jesse	light crimson
Dr. Marx	rosy carmine	Marquise Boccella	pale blush
Duchess of Sutherland	{ bright	Prudence Ræser	pink
	{ rose	Comte d'Eu	carmine
Lady Alice Peel	deep pink	Coquette de Mont-	} cherry col.
La Reine	brilliant rose	morency	

BOURBON ROSES.

Acidalie	white	Queen	fawn-colour
Bouquet de Flore	deep crim.	Souchet	crimson, shaded pur.
Comice de Seine et	} cherry red	Souvenir de la Malmaison	{ pale
Marne			{ flesh
Gloire de Paris	deep crimson	George Cuvier	rosy carmine
Grand Capitaine	velvety scarlet	Mdme. Souchet	blush marg. red
Paul Joseph	crimson purple	Mdme. Lacharme	wh. ting. blush

NOISETTE ROSES.

*Cloth of Gold	yellow	*Ophirie	salmon & fawn
Fellenberg	bright crimson	*Solfaterre	bright sulphur
*Lamarque	straw-colour	Nemesis	deep crimson

CHINA ROSES, *see* p. 102.TEA-SCENTED ROSES, *see* p. 103.

* Those marked with an asterisk require protection in winter, unless planted against a wall.

A certain class of shrubs, by botanists included in the natural order Ericaceæ, but popularly known as "American plants," from the native country of many of them, or "peat-plants," from their thriving best in that kind of soil, ought to have a place in every garden. The only objection that can be urged against these

plants is that many of them refuse to grow in strong soils ; and therefore, in such places, beds of peat, or of leaf-mould and sand where peat is not procurable, must be prepared on purpose. The *Rhododendron* and *Azalea* are exceedingly handsome genera, and the first has the additional merit of being evergreen. By the intermixture of the hardy species with the Nipal *R. arboreum*, and others, many beautiful hybrids have been produced within the last ten years ; and more recently, a race with yellowish flowers has been obtained, probably by crossing a *Rhododendron* with the yellow *Azalea pontica*, or *A. sinensis* ; for it has been found that *Rhododendron* and *Azalea* breed freely together. Many very beautiful *Azaleas* have also been raised by intermixing the yellow, red, and pink natural species ; and as these hybrids are much superior to most of the old kinds, our selection will be chiefly from them.

<i>Botanical Name.</i>	<i>Character.</i>	<i>Colour of Flowers.</i>	<i>Time of Flowering.</i>
<i>Rhododendron ponticum</i>	everg. shrub	purplish	May—June
<i>R. catawbiense</i>	—	rosy lilac	June—July
<i>R. punctatum</i>	—	pink	July—Aug.
<i>R. hirsutum</i>	—	red	May—June
<i>R. campanulatum</i> . .	—	pale pink	April
<i>R. dauricum atrovirens</i>	—	purple	Feb.—Mar.
HYBRID VARIETIES.			
<i>Lowii</i>	—	{ wh., spotd. }	May—June
		{ with crim. }	
<i>Smithii</i>	—	{ rosy purp. }	Apr.—May
		{ spot. with black }	

Botanical Name.	Character.	Colour of Flowers.	Time of Flowering.
<i>Russellianum</i> . . .	everg. shrub	rosy red	Apr.—May
<i>Stramineum</i> . . .	—	straw-coloured	Apr.—May
<i>Nobleanum</i> . . .	—	rose-colour	Apr.—May
<i>Venustum</i> . . .	—	pale rose	Feb.—Mar.
<i>Altacrerense</i> . . .	—	crim.-scarlet	Apr.—May
<i>Broughtonii</i> . . .	—	pale rose, spot.	Mar.—Apr.
<i>Albertii</i> . . .	—	pale pink, spot.	Mar.—Apr.
<i>Azalea pontica</i> . . .	decid. shrub	yellow	May—June
<i>A. calendulacea</i> . . .	—	{yel., red, & } cop. cold. }	May—June
<i>A. glauca</i> . . .	—	white	June—July
<i>A. arborescens</i> . . .	—	rose-coloured	June—July

HYBRID VARIETIES.

Pontica grandiflora
Pontica pallida
Pontica flammea
Nudiflora Goveniana
Nudiflora scintillans
Nudiflora thyrsiflora
Calendulacea Morterii
Calendulacea fulgida

BELGIAN HYBRID
VARIETIES.

Amabilis . . .
Coruscans . . .
Cruenta . . .
Exquisita . . .
Magnifica . . .
Mirabilis . . .
Superba . . .
Versicolor . . .

Botanical Name.	Character.	Colour of Flowers.	Time of Flowering.
<i>Kalmia latifolia</i> . . .	everg. shrub	{wh. or pale } pink }	June—July
<i>K. glauca</i> . . .	—	red	Apr.—May
<i>Leptophyllum thymifolium</i> }	—	white	May—June
<i>Ledum latifolium</i> . . .	—	white	Apr.—May

Botanical Name.	Character.	Colour of Flowers.	Time of Flowering.
<i>Gautheria Shallon</i> . . .	everg. shrub	white	May
<i>Pernettya mucronata</i> . . .	—	white	May
<i>Arbutus Unedo</i> . . .	—	white	Sept.—Dec.
<i>A. procera</i> . . .	—	white	May
<i>Leucothoe floribunda</i> . . .	—	white	Feb.—May
<i>Zenobia speciosa</i> . . .	—	white	June
<i>Cassandra calyculata</i> . . .	—	white	Apr.—May
<i>Erica carnea</i> . . .	—	pink	Jan.—Apr.
<i>E. australis</i> . . .	—	red	Apr.—Aug.
<i>E. mediterranea</i> . . .	—	red	Mar.—May.

ORNAMENTAL SHRUBS AND SMALL TREES.

Those marked thus * are suitable for a wall.

Botanical Name.	English Name.	Character.	Colour of Flowers.	Time of Flowering.
<i>Clematis montana</i>		dec. climb.	white	May
<i>C. cœrulea</i>		dec. climb.	blue	June—July
<i>C. florida Sieboldii</i>		dec. climb.	wh. & pur.	June—July
<i>Pœonia Moutan</i>	(tree peony)	decid. sh.	pink	May
<i>Banksii</i>				
<i>P. Moutan papaveracea</i>	—	decid. sh.	wh. & pur.	May
* <i>Magnolia grandiflora exoniensis</i>		everg. tree	white	June—Sep.
<i>M. conspicua</i>		decid. sh.	white	Mar.—Apr.
<i>Berberis dulcis</i>	(Berberry)	everg. sh.	yellow	Apr.—May
<i>B. aquifolium</i>	—	everg. sh.	yellow	Apr.—May
<i>B. aristata</i>	—	decid. sh.	yellow	June—July
<i>Cistus cyprius</i>	(Gum Cistus)	everg. sh.	wh. & crim.	June—July
<i>C. populifolius</i>	—	everg. sh.	white	May—July
<i>Helianthemum vulgare flore pleno</i>	Sun Rose	trail. sh.	yellow	May—Aug.
<i>H. hyssopifolium multiplex</i>		trail. sh.	copp.-col.	May—Aug.
<i>H. macranthum multiplex</i>	—	trail. sh.	cream-col.	May—Aug.
<i>H. canescens</i>	—	trail. sh.	red. crim.	May—Aug.
<i>Hibiscus syriacus</i> , many varieties	{ Althæa } { Frutex }	decid. sh.	various	Aug.—Sep.
<i>Hypericum calycinum</i>	{ St. John's } { Wort }	everg. sh.	yellow	June—Aug.
* <i>Ceanothus azureus</i>		everg. sh.	blue	May—Aug.
* <i>C. thyrsiflorus</i>		everg. sh.	blue	May—Aug.

Botanical Name.	English Name.	Character.	Colour of Flowers.	Time of Flowering.
<i>Rhus Cotinus</i>	{ Venetian Sumach }	decid. sh.	red. green	June—July
<i>Ulex europæa flore pleno</i>	{ (Furze) }	everg. sh.	yellow	Mar.—May
<i>Cytisus albus</i>	(Portugal Broom)	decid. sh.	white	May—June
<i>C. scoparius albus</i>	(Broom)	decid. sh.	cream-col.	May—June
<i>C. purpureus</i>	—	decid. sh.	purple	May—July
<i>C. Laburnum</i>	(Laburnum)	decid. sh.	yellow	May—June
<i>Robinia hispida</i>	(Rose Acacia)	decid. tree	rose-col.	June—Sep.
<i>Coronilla emerus</i>	{ Scorpion Senna }	decid. sh.	yellow	May—June
* <i>Wistaria chinensis</i>	—	dec. climb.	blue	May—June
* <i>Cercis Siliquastrum</i>	{ Judas Tree }	decid. tree	pink	May
<i>Amygdalus communis nacrocarpa</i>	{ (Almond) }	decid. tree	rose-col.	Mar.—Apr.
<i>Prunus spinosa flore pleno</i>	{ (Sloe) }	decid. sh.	white	Mar.—Apr.
<i>Cerasus vulgaris flore pleno</i>	{ Cherry Tree }	decid. tree	white	May
<i>C. serrulata</i>	—	decid. sh.	white	May
<i>C. japonica multiplex</i>	—	decid. sh.	pink	Mar.—Apr.
<i>C. lusitanica</i>	(Portugal Laurel)	everg. sh.	white	June
<i>C. Laurocerasus</i>	(Com. Laurel)	everg. sh.	white	Apr.—May
* <i>Kerria japonica flore pleno</i>	—	decid. sh.	yellow	Mar.—June
<i>Spiræa bella</i>	—	decid. sh.	red	May—June
<i>S. ariaefolia</i>	—	decid. sh.	white	July
<i>S. Lindleyana</i>	—	decid. sh.	red	July
<i>S. prunifolia flore pleno</i>	—	decid. sh.	white	April ?
<i>Potentilla fruticosa</i>	—	decid. sh.	yellow	July—Aug.
<i>Cratægus Oxyantha multiplex</i>	{ (Hawthorn) }	decid. tree	white	May
<i>C. O. rosea</i>	—	decid. tree	pink	May
<i>C. O. punicea flore pleno</i>	{ — }	decid. tree	dark red	May
<i>Amelanchier Botryapium</i>	—	decid. sh.	white	April
<i>Pyrus spectabilis</i>	{ Chinese Crab tree }	decid. tree	pink	April—May
<i>Cydonia japonica</i>	{ Japan Quince }	decid. sh.	red	Mar.—June
<i>C. j. flore albo.</i>	—	decid. sh.	whitish	Mar.—June
<i>Calycanthus floridus</i>	{ Carolina Allspice }	decid. sh.	dull crim.	May—Aug.
* <i>Chimonanthus fragrans</i>	{ (Winter flower) }	decid. sh.	{ pale yellow and crims. }	Dec.—Mar.

Botanical Name.	English Name.	Character.	Colour of Flowers.	Time of Flowering.
<i>Philadelphus coronarius</i>	(Mock Orange)	decid. sh.	white	May—June
<i>P. Gordonianus</i>	—	decid. sh.	white	July
<i>Deutzia scabra</i>	. . . . .	decid. sh.	white	May—June
<i>Ribes sanguineum</i>	(Currant)	decid. sh.	red	Mar.—Apr.
<i>R. s. Westlandii</i>	. . . . .	decid. sh.	white	Mar.—Apr.
<i>R. aureum præcox</i>	. . . . .	decid. sh.	yellow	Mar.—Apr.
<i>R. speciosum</i>	. . . . .	decid. sh.	red	May—June
<i>Hydrangea hortensis</i>	. . . . .	decid. sh.	pink	June—July
<i>H. quercifolia</i>	. . . . .	decid. sh.	white	June—Aug.
<i>Viburnum Tinus</i>	(Laurustinus)	everg. sh.	white	Dec.—Mar.
<i>V. Opulus sterilis</i>	{ Gueldres Rose }	decid. sh.	white	May—June
<i>Lonicera Periclymenum belgicum</i>	{ Dutch Honey-suckle }	dec. climb.	red & wh.	May—Oct.
<i>L. sempervirens</i>	{ Trumpet Brownii }	dec. climb.	scarlet	June—Aug.
<i>L. pubescens</i>	. . . . .	dec. climb.	yellow	June—July
<i>Leycesteria formosa</i>	. . . . .	decid. sh.	wh. & crim	July—Oct.
<i>Halesia tetra-tera</i>	{ Snowdrop tree }	decid. sh.	white	April—May
<i>Syringa vulgaris</i> , several varieties	{ (Lilac) }	decid. sh.	{ pur., white, & blue }	May
<i>S. persica</i>	(Persian Lilac)	decid. sh.	blue	May—June
<i>Jasminum officinale</i>	(Jasmine)	decid. sh.	white	June—Aug.
<i>J. nudiflorum</i>	. . . . .	decid. sh.	yellow	Nov.—Jan.
<i>Catalpa syringæfolia</i>	. . . . .	decid. tree	wh. & pur.	July—Aug.
<i>Paulownia imperialis</i>	. . . . .	decid. tree	purple	
<i>Buddlea globosa</i>	(Honey-flow.)	decid. sh.	yellow	May—July
<i>Lavandula spica</i>	(Lavender)	everg. sh.	blue	Aug.—Sep.
<i>Daphne Mezereum</i>	(Mezereon)	decid. sh.	red	Feb.—Mar.
<i>D. Cneorum</i>	(Garland-flowr.)	everg. sh.	pink	April—May
<i>Yucca gloriosa</i>	{ Adam's Needle }	everg. sh.	white	July—Aug.
<i>Forsythia viridissima</i>	. . . . .	decid. sh.	yellow	April?
<i>Weigela rosea</i>	. . . . .	decid. sh.	pink	May?

The following kinds have inconspicuous flowers, but are ornamental in their foliage or fruit:—

<i>Ilex Aquifolium</i> , many varieties	{ (Holly) }	everg. sh.	{ berries red in winter, or leaves variegated }
<i>Rhamnus Alaternus</i>	(Alaternus)	everg. sh.	

Botanical Name.	English Name.	Character.	Colour of Berries, &c.
* <i>Cratægus Pyracantha</i> . . . }	(Pyracantha)	everg. sh.	{ berries red or yellow in winter
* <i>Cotoneaster microphylla</i> . . .		everg. sh.	berries red in winter
* <i>C. rotundifolia</i>		everg. sh.	berries red in winter
* <i>Hedera Helix</i> , many varieties }	(Ivy)	everg. sh.	{ leaves of some sorts variegated
<i>Aucuba japonica</i>		everg. sh.	leaves variegated
<i>Symphoricarpos racemosus</i> . . . }	(Snow-berry)	decid. sh.	berries white in winter
<i>Ligustrum vulgare</i> { <i>sempervirens</i> . . . }	{ Evergreen Privet }	everg. sh.	
<i>Phillyrea media</i>		everg. sh.	
<i>Laurus nobilis</i>	(Sweet Bay)	everg. sh.	
<i>Buxus sempervirens</i> , many varieties . . . }	(Box)	everg. sh.	{ leaves of some sorts variegated.
<i>Liquidambar Sty-raciflua</i> }	(Sweet Gum)	decid. tree	leaves crims. in autumn
<i>Taxus baccata</i> , gold striped (Yew)		everg. sh.	leaves variegated
<i>T. baccata fastigiata</i> , (Irish Yew)		everg. sh.	
<i>Thuja occidentalis</i> { American Arbor Vitæ }		everg. sh.	
<i>T. orientalis</i> . { Chinese Arbor Vitæ }		everg. sh.	
<i>T. pendula</i> (Weep. Arbor Vitæ)		everg. sh.	
<i>Cupressus lusitanica</i> { Cedar of Goa }		everg. sh.	
<i>C. torulosa</i>	(Bhotan Cypress)	everg. sh.	
<i>Juniperus excelsa</i>	(Juniper)	everg. sh.	
<i>J. Virginiana</i>	(Red Cedar)	everg. sh.	
<i>J. Sabina</i>	(Savin)	everg. sh.	
<i>J. recurva</i>		everg. sh.	

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1



THE LAKE VIEWED FROM THE TOP OF THE MOUND AT THE LOWER END.

HINTS
ON
LANDSCAPE GARDENING.

BY
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PHYSIOLOGY," ETC. ETC.**

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PREFACE.

THE substance of the following pages were originally published, in detached letters, in Paxton's Horticultural Register, while I was employed as Editor of that work; and having attracted some notice in that form, I have been advised by many friends to remodel them in a shape more suitable for separate publication. This suggestion I have complied with, in hopes that they may aid in directing the taste of the amateur improver in that most important of all matters—forming his house and grounds on the best principles for domestic enjoyment; and also in hopes of aiding the young *professional* improver in acquiring a knowledge of his art.

In this treatise no attempt has been made to enter into details in any of the branches of the art; but in planting and arranging on the *gardenesque* style of laying out grounds immediately

attached to the house, much useful detail will be found in Professor Rennie's work, *THE FLOWER GARDEN*, a new edition of which has been very carefully revised by myself and others. In this work, besides the principles laid down for laying out, a very extensive list of flowering plants is given, indicating their colour, height, and time of flowering,—matters of essential importance in planting a flower-garden.

Where greenhouses are to be erected, much scientific and popular information will be found in Mr. M'Intosh's work entitled *THE GREENHOUSE*, both as to the form of the house, the situation, the plants most suitable for cultivation, and the best mode of procuring the necessary degree of artificial heat.

Jan. 9th, 1842.

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LANDSCAPE GARDENING.

OBSERVATIONS ON THE PRESENT TASTE AND STYLE OF ORNAMENTAL GARDENING.

As gardening was one of the first, so is it one of the most delightful occupations of man; it contributes to his necessities, as well as to his comfort and pleasure. The cultivation of salutary herbs, and grain, and fruit for diet, was necessary to his existence; that of flowers for their scent and beauty, and of trees for shade and shelter, were equally necessary accompaniments. Hence the business became divided into distinct branches; namely, kitchen, fruit, flower, and ornamental gardening. The two first, though of most real utility, are considered subordinate to the two last, more especially the last of all, which has been dignified by the title, "*landscape gardening*." This title is borrowed from that given to any prospect or view of a country; but particularly from those works of art depicting either wild or ornamented scenery, called landscape paintings, representing any space or region of a country with its various objects and all their lights and shadows.

The first ornamented gardens of which we have

any good account were regular inclosures with everything they contained arranged most symmetrically ; justifying the often-quoted sarcastic couplet of our poet Pope :—

“Grove nods at grove, each alley has its brother,
And half the lawn but just reflects the other.”

This rectangular and symmetrical style of gardening was however quite natural to man in the earlier ages of the world ; he saw nature in all her wildest forms around him, and as lord of the creation, he felt a kind of instinctive desire to bring her under subjection ; he wished a contrast, and an artificial disposition of his trees and boundaries that would mark and secure his possessions, and, at the same time, exhibit his skill as well as his sovereignty. Art was then his idol, not nature ; and everything he did in his appropriation of plants, was to show how much they were under his dominion.

This artificial style of gardening continued to prevail in every civilised country, from the earliest times till after the beginning of the eighteenth century. Before this epoch, Le Nôtre, a French garden architect and ornamental gardener, was extensively employed by almost every nation in Europe ; and some portions of his designs are still to be seen in France, and many imitations of them everywhere, as well in this country as on the Continent.

While Le Nôtre and his contemporaries were driving every trace of nature from their garden

scenes, the landscape-painter was at the same time enthusiastically engaged in studying her wildest forms, and copying every incident in real scenery which would improve his sketches or enrich his pictures.

Before the period to which we are alluding, many eminent painters had immortalised their fame by the beautiful landscapes which they had painted. Among these celebrated pictures, it is remarkable that very few trim garden-scenes are introduced, especially as the artists, both gardeners and painters, were probably admirers of each other. This, however, is only an instance of how much the human mind is liable to be enchained by custom or the reigning fashion. The idea had not yet been entertained, perhaps, that the principles of ornamental gardening and landscape-painting are the same; for in practice, at that time, the artists took directly contrary routes: the painter studying nature only, while the gardener busied himself in cutting and slashing vegetation into all the most whimsical regular figures his ingenuity could invent! Geometry, with its lines and rules, was his text-book; without this, he could not trace a line, or prune a tree, or trim a hedge! On the other hand, nature in all her varied forms, and habits, and hues, was seized and imitated by the painter, exhibiting her as she appeared on the mountain-steep, or in the secluded dell—by the reedy river side—on the margin of the placid lake, or on the umbrageous hill.

Thus, at the same time, were painters and gar-

deners employed ; each occupied with the same objects ; the one forming real, the other painted scenery, but with very different views ; the first was enamoured of "neglect and accident," the other seriously annoyed if a single leaf projected from the smooth surface his shears had made.

The love of gardening and of fine pictures, however, kept pace with each other, and were often united in the same cultivated mind ; indeed, we seldom meet a virtuoso who is not a lover of all the fine arts. Both gardeners and painters were employed in the embellishment of regal, noble, ecclesiastical, and manorial residences. While the exterior was shaded, sheltered, and adorned by the one, the interior was decorated and enriched by the other. Latterly, however, the style of the painter's landscape "bore away the bell ;" the admirable scenes presented on canvas were extolled by every eye of taste, merely because they were more true to nature ; and when compared with the most laboured dispositions of the garden, the latter sunk in public estimation, and was soon followed by the cry—"Why is not every gardener a painter ?"

This impression was so strong after the new light broke in upon the minds of the cognoscenti, that Kent, a painter by profession, was actually induced to become landscape-gardener, though that professional title was not then invented. His new task was neither an easy nor a pleasant one ; he aimed at producing *immediate effect*, on the lawn at Kew, as he used to do in his studio ; but

this was impracticable, as he found he must wait many years before he could possibly see the full effects of his dispositions of trees, shrubs, &c. His first attempt was certainly a failure ; and having, among other freaks, planted some dead trees to give apparent age to his groups, earned for him derision rather than fame ; for, however dead trees or branches may be unobjectionable in real scenery, if solely the effects of time or accident, they become quite ludicrous if imitated by labour and design.

But as many of the country-seats of the nobility and gentry in this country at that period were capable of great improvement by merely clearing away redundant formality, the painter's ideas were not entirely neglected ; on the contrary, they were entertained and acknowledged by not a few ; and, accordingly, improvement by abstraction became the rage. Hence a reformation (by far too radical however) took place. Every connoisseur wondered how the contracted ideas of the gardener could have been so long tolerated ; a kind of remorse was felt that the visual enjoyment of real pictures or living scenery, should have been so long withheld ; a sweeping sentence of condemnation was instantly pronounced by the arbiters of fine taste against every right line and right angle ; and open war was declared against every symmetrical disposition, and regular arrangement in pleasure-gardens or in parks : and, of course, Dutch and Italian designs quickly disappeared.

It is not at all improbable that Milton's descrip-

tion of the garden of Eden, so beautifully poetical and true to nature, had a decidedly influential effect on the minds of both painters and gardeners of that day. The poet not only condemns the "curious knots" in parterres, so fashionable in his time, but shows what garden scenery really should be:—

"A happy rural seat of various views ;
Groves whose rich trees wept odorous gums and balm,
Others whose fruit, burnish'd with golden rind,
Hung amiable, and of delicious taste ;
Betwixt them lawns, or level downs, and flocks
Grazing the tender herb, were interposed,
Or palmy hillock : or the flowery lap
Of some irriguous valley spread her store,
Flowers of all hue, and without thorn the rose.
Another side, umbrageous grots and caves
Of cool recess, o'er which the mantling vine
Lays forth her purple grape, and gently creeps
Luxuriant ; meanwhile murm'ring waters fall
Down the slope hills, dispersed, or in a lake,
That to the fringed bank with myrtle crown'd
Her crystal mirror holds, unite their streams."

Soon were the venerable avenues uprooted—the airy terrace with its verdant slopes levelled with the general surface of the ground ; every nicely-clipped hedge or arcade, pyramid, or globe ; every flower-plat, rosette, or star—all were banished from the lawn and gardens ; right lines, whether of roads, or walks, or fences, were diverted into regularly flowing sweeps ; the mansion which had been for years partially shaded and veiled by trees, was set out and exposed on a smooth and closely-shaven lawn ; hedgerow trees were exchanged for

insulated clumps dotted over hill and dale ; and straight visible fences gave way to invisible ha ! ha's !

Thus the regularity of the old style was excluded to admit the irregularity of the new ; a change too recklessly made, and which has proved, in many instances, only a change from one kind of sameness to another fully as tedious and uninteresting.

Nor was the new style an imitation of what it was presumed to be founded on, namely, the painter's ideas of the most beautiful combinations of land, wood, and water. The opinion of the first reformers appeared to be, that to depart as much as possible from the old style, by introducing irregularity was all that was wanted to give the new scenery a truly natural character.

The new style received the title of " English Gardening ;" and certainly there were some very perfect things of the kind executed in various parts of the country ; not, however, by clearing all the old features away, but by a judicious reservation of part of them, and not by an implicit adoption of every suggestion of the reformers, but by a tasteful rejection of many of their dogmas.

It is perfectly true, that, though the guiding principles of composition of both the painter and the landscape-gardener are the same, there must necessarily be a great difference in the execution ; the one endeavours to gratify the present, the other future generations. The painter can brighten his

lights, deepen his shadows, give play to his outlines, and mellow his tints at pleasure, so as to preserve a well balanced display of light and shade ; all his objects, whether on the foreground, in the middle distance, or in the offscapè, he can dispose as seems to him best. The height, and distance, and form of the mountains ; the character and extent of water ; the very form of the clouds and tints of the sky—all he can arrange as his taste or fancy suggests. And neither is the painter confined to the real character of the trees, and shrubs, and herbs, which he introduces into his picture ; a burdock or other monstrous weed on his foreground answers his purpose as well as the finest plant in cultivation. Such worthless plants in a painting give no offence to the beholder in any way ; and, moreover, the rudest scene may be preferred for the canvas, but is seldom or never required to be, nor indeed ever should be, formed by the gardener ; because the most trifling mark of art about such a work robs it of every attraction which it may possess as a merely accidental association.

The gardener's pictures are all formed in the vicinity of the mansion, or with special reference to the view from its windows. Here comfort and convenience are consulted, the smoothest turf and walks, the gayest flowers, the choicest shrubs, and finest trees, and every sign of high keeping and art must prevail ; here all the taste and skill of the gardener should be displayed ; here fine taste is peculiarly applicable ; and when these, his fore-

ground dispositions are fixed, he has to design and connect the scenery of the park therewith, and that of the surrounding country with both.

In the execution of all this, the most refined taste, united with a competent share of practical, botanical, and arboricultural knowledge, is absolutely necessary; and in this it is said, the professional ideas of the painter would be particularly available. Let us suppose, then, that a Claude Lorraine were engaged with the gardener in laying out an English garden; the trim neatness, the smooth and regular edges of the walks and borders of the dressed ground would probably be objected to by the painter, who would rather see roughness, intricacy, and irregularity prevail, except when seen in connexion with the architecture. But the gardener, in his turn, would object to any such rough wildness and want of order being admissible near the abode of refinement and affluence; in which case the painter would advise him to hide as much as possible the hard lines; to break the uniformity of the clumps; to give variety to the masses of planting, by associating trees and shrubs of different tints and character; to place near the points of view the strongest growing herbs and shrubs, and quickest growing trees to flank the glades or vistas which he would wish to have extended across the park to catch objects of interest within, or in the open country beyond. The painter would also advise but few single trees to be planted, without having a few shrub-like growths near their base; and

also, that all clumps and groups should be of one kind of tree, irregular in outline, and intermixed with under-growths, to creep out on the turf around them.

If water entered into the composition, the painter would advise it to be disposed in its natural place—the lowest ground ; and whether a lake or river, he would have it as unlike a canal as possible. The natural abruptness of the banks he would preserve, as well as all their sinuosities and overhanging trees and bushes. Nor would he be anxious to expose too much of the water in one place, unless it could appear as a reach, either advancing towards or receding from the eye, for the sake of the reflections from the ripple on its surface. If a lake, he would choose to have it irregular in shape, as the elevation of its banks would seem to allow ; and to diversify it with trees and islets, as its size would sanction ; and likewise to mask its extremities if such were too apparent.

If buildings of any description, either for use or ornament, were in the landscape, the painter would advise them to be partially concealed, and only allowing the most ornamental or characteristic angle to jut out from among trees and shrubs. If the park had a finely undulated surface, with smoothly-rounded knolls, and winding dips between, the painter would adapt the extent and forms of his groups and thickets, and character of the trees, to correspond. On the other hand, if there were within the park or in its environs

strong natural features, as cliffs and rugged declivities, deep ravines, or the beds of mountain streams, he would add such accompaniments of vegetation, of alpine and aquatic trees, as would harmonise with the general aspect of the place, so as to produce (whatever may be the character of the district) a well-connected and harmonious whole.

Now, if all this would be advised by a landscape painter, or an amateur having "a painter's eye," it differs not a jot from what would be done by every landscape gardener who knows his business, or has any pretension to such a professional title. Hiding the hard lines in the dressed ground, and employing more under-growths among the groves and groups of trees in the park, are the only additional amendments of the common practice which this prince of landscape painters could recommend in laying out a country-seat in the English style. He would also object, perhaps, to the great extent of naked lawn which prevails in many English parks; as nothing is so horrifying to a painter as great blotches of any one colour in his eye, or on the canvas, without the chequering of shadows, of flocks or herds, or of other objects producing variety of tints; and therefore a park laid out by a painter would be rather a series of diverging glades, and broken parts, than one which is dignified by the grandeur of its vast masses of wood, and its expansive extent of verdant turf.

That many of our English parks are laid out

in the style just alluded to, are lifeless and uninteresting, must be acknowledged. In passing through them, though they may have an air of grandeur suitable enough for a regal or ducal palace ; yet but few parts of such scenery would be admired by a painter, because wholly unfit for the canvas. Hence it may be inferred that an English landscape gardener's park may be very suitable for the residence of a person of rank, and yet by no means equal to the *beau idéal* of a connoisseur, who may be blessed or plagued by possessing a painter's eye. Still it is very possible to bring the extremes nearer together ; to diversify and enrich the naked tameness of the "*capability*" style ; and to soften the asperities, and qualify the exuberance of imagination observable in some of the most celebrated paintings.

By the *capability* style is meant that which aimed at making every scene simply beautiful by levelling and smoothing the surface and bounding every feature of the landscape by curved or waving lines. A style begun by Kent and Bridgeman, carried to its utmost limits by the celebrated Brown, but since corrected and improved by Repton, Loudon, and others.

In the practice of making roads and fences, arranging plantations, water, or other features of park or garden scenery, there are general rules fixed by professional experience ; but no rules can be laid down for the exercise of fine taste. This is an accomplishment which can only be acquired by the study of the most universally admired

scenes in nature ; a study of the finest painted landscapes ; and an intimate acquaintance with the cause or causes why one scene is more beautiful or interesting than another. In the exercise of taste while designing any portion of a landscape, it is well to be guided by the laws of proportion as to heights and distances ; and particularly to foresee what will be the effects of time, of vegetable growth, and the difference of habit of young and aged trees.

There is one circumstance belonging to every place which has an overbearing effect on the designs of the improver, namely, its natural character, or "genius," as it is called by a French writer. If a place be naturally beautiful in the undulation of its surface, the improver can only make it more so by his additions in preserving its character. If the undulations be on a larger scale, the knolls higher and the hollows deeper and wider, then he may attempt to give the whole a look of grandeur by the extent and amplitude of his plantations and general dispositions. But should the features of the place be rugged and broken with great and abrupt variations of surface, then all his arrangements and dispositions must be planned to correspond.

It has been in attempting to give this last description of places a character of beauty, by extreme and *expensive levelling*, that the system has been brought into disrepute ; because it is an unnecessary piece of labour promising no kind of advantage ; for assuredly, no perfectly level sur-

face (except a bowling-green) can be so pleasing as a sloping or a slightly undulating one. It is astonishing what vast sums of money have been expended in filling up valleys and lowering hills in the near neighbourhood of mansion-houses during the last century; and these are now, in several instances, being restored to their original state. It is such injudicious doings and undoings which has rendered the profession of landscape-gardening less popular than it used to be; and another thing—the fancy for improving garden scenery is less prevalent than formerly; Brown and his pupils having done so much in the alteration of old, or in forming entirely new, places in every county in the kingdom in their time, that little remains to be done by professional men. Another cause why professional men are less employed than heretofore is, that almost every gardener attached to a place of consequence is, now-a-days, as capable of designing and executing any ornamental improvement in a park or garden, as those who make improvement their special business.

As there is great diversity of character in places which the landscape-gardener may be employed upon, he ought to have a general stock of knowledge to be drawn upon as opportunity offers; for as no one rule can be generally applicable to all cases, it is impossible to lay down any code of laws by which a place can be laid out without a tasteful direction. And, perhaps, the best way of conveying to the reader a knowledge of

the practice and principles of this delightful art, will be by describing a few places as they now exist, and the means which have been adopted in altering them to their present state.

The ancient country-seats of this kingdom were either castles, belonging to the barons; abbeys, belonging to religious bodies; or manor-houses, the property of the wealthier class of yeomen. The first were usually fortified places, where there was but little space for gardening of any kind, except, perhaps, a few beds of flowers on the terraces of the building. The abbeys were always surrounded by lofty walls or deep moats, sometimes both; within which, were kitchen gardens and orchards; the moats serving as piscatories, indispensable to such establishments in catholic times. Sometimes these last, as well as the regal palaces, had deer-parks, or chaces, attached. The manor house was only a superior farm-house, surrounded by its inclosed arable fields, orchards, and meadows.

When the quarrels between the king and barons, and all intestine broils, had ceased, domestic fortifications were no longer necessary. And after the restoration of CHARLES II., every landholder seems to have wished for the same freedom for his eye and foot about his residence, which had been achieved for his mind in the times preceding the Restoration. This paved the way for the grand revolution in ornamental gardening, which took place soon afterwards under the auspices of Kent and others, as already stated.

During the reigns of WILLIAM III. and ANNE, the Dutch style of gardening prevailed, as well in designing parterres, as in the planting parks. The royal palaces of Hampton Court, Kensington, and St. James's, are examples ; as well as the gardens of colleges in our Universities. Avenues were then also very generally planted, many of which still remain, having escaped the sentence of extermination passed upon them by the first reformers.

The castellated mansions of the nobility were altered by pulling down and clearing away the outworks, base-courts, and all ; and setting the principal building on a naked lawn ; removing the offices and gardens to some distance ; cutting down the avenue and every visible rank of trees ; and making a winding or serpentine approach from the outer porter's lodge to the front entrance or vestibule of the house. If woods approached too near the house, their margins were thinned to lighten the interior gloom, and give airiness to the exterior ; and if a naked hillock appeared in the view from the windows, it generally had a clump of trees placed on its summit. A strip of pleasure ground (as it was called)—that is, a gravel walk bordered with shrubs—was the usual path of communication between the house and gardens. If water was, or could be, brought into view from the windows, whether a lake or river, it was made to assume the semblance of either a straight or a crooked canal ; and in either case it was called a "sheet of water." Furze, broom, brambles, white and black thorns, and all other wild plants

were carefully grubbed up, and banished from the lawn; and thus the place was finished.

At the suppression of the abbeys, monasteries, and other religious houses, in the time of Henry VIII., these fine estates were either granted by the King to certain of his officers or favourites, or sold to such of his subjects as could afford to buy them. About the year 1785 Ornamental Gardening underwent a great revolution; many of the priories and smaller religious houses which had been turned into farm-houses of the better class underwent the same kind of alteration and fashionable improvements, which was bestowed on the castellated buildings. The surrounding walls were razed; the moat was filled up: the chapel was turned into a dairy or a brewhouse; and remained an ornamental wing of the building. If a rivulet fed the old moat, it was dammed up to form a basin near the house; and the woods were thinned or extended as has already been mentioned.

The houses of the richer class of yeomen, or country gentlemen of moderate fortune, also received a certain degree of embellishment. The hedges round the house were removed to extend the pasturage; evergreen shrubs flanked the building; trees hid the barns, and stables and rickyards; and were also planted in groups on the lawn, and in the distant hedge-rows, and corners of the fields, to give the whole farm a park-like appearance: hence this style received the French title of "*ferme ornée*."

We now proceed to transcribe the substance of remarks made many years ago on several places which we then visited ; and which detail will give us opportunity to explain every principle as well as every practical rule of the art, by which such places were brought into the state in which they are described ; and by which any other place may be altered, ornamented, and perhaps really improved,



AMARYLLIS.



DESCRIPTION OF FAIRFAX HALL.

It was on the thirtieth of May, and about four o'clock in the afternoon, I first caught a glimpse of the woods which surround and diversify the park of Fairfax Hall. The latter appeared to occupy higher ground than that over which I was travelling; the park paling was here and there visible to the left, through scattered tufts of forest trees and bushes on a portion of unenclosed common on the outside of the park. The turnpike-road seemed at a quarter of a mile distant from the principal entrance (which at the moment struck my eye), as if it led directly through the park; because the gates are erected across the right line of the road on which I was advancing; but at the distance of about two hundred yards from the gates the high road trended away through

vista to the right, and disappeared in the woods which extended far in the same direction. Through this vista, however, I just caught a glimpse of the church spire of the next post-town, at the distance of four or five miles off.

Placing the main entrance gate across the right line of the road leading thereto, is one of the rules always observed by landscape gardeners; and the reasons given for it are, the inviting facility of entrance for carriages, and avoiding damage to the piers or gate by their wheels. A tortuous twist into any gate is always inconvenient, and often renders necessary another short turn within. Other considerations in fixing on the place for a principal entrance, are, that it should stand on somewhat lower ground than the house to which it leads: in order that the approach should ascend rather than descend to the house; that it should not be seen from the principal windows, and that a right line through the gate should point as near as possible to the house. To obtain all these particulars, it is often necessary to throw out a considerable angle of the park in order to have a fair station for the right position of the gate and lodge.

The gate which I was about to enter is embosomed in wood; neither this nor the porter's lodge is extravagantly splendid. The latter is a plain substantial dwelling in the Grecian style of architecture; the former is a well-designed iron palisade for foot passengers, and carriage gates, between massive stone piers. The lodge is roomy,



VIEW SOON AFTER ENTERING THE GATE

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and fitted up with every convenience for one of the under gardeners and his family; it is flanked by its little garden, in which, besides common culinary vegetables, there are evergreen shrubs and flowers, among which arose a fine purple beech. This, together with a fine cedar of Lebanon which stood opposite the lodge, stretching its horizontal arms across the entrance, told me at once I had entered upon dressed ground; and the architectural character of the lodge as plainly told me what description of mansion I was about to enter.

These first impressions are always intended to be given by a clever designer as anticipations of what is to follow. The lodge should partake of the architectural character of the house, only in a subdued tone of finishing. Sometimes we see a thatched cottage of most homely aspect, pointing the way to a magnificent pile of building; and again we see a splendid highly-finished lodge, or pair of lodges, at the principal gate of an ugly nondescript mass of brickwork! Both of these incongruities are in bad taste; because in the first case there is want of consistency, and in the second positive disappointment.

From the gate the smooth and firm carriage road passed through a dense and lofty grove of forest trees, whose boundary on neither side was discernible; imparting an idea of confinement in some degree painful to a stranger, who was eagerly looking about for some less bounded view. While in this irksome suspense, the chaise suddenly emerged from the deep shade of the wood into open

day—a most beautiful prospect lay before me—I paused to contemplate the richly-varied scene—fine masses of wood hung, as it were upon the slopes of a beautiful valley, which commencing at and retiring from the brow on which I stood, widening as it receded, and winding round a promontory on the right, was soon lost to the view. A little way back on this promontory the south-east angle and part of the south portico of the house were visible at the distance of half a mile; while beyond it, and almost buried in the lowest dip of the valley, an expanse of water reflected the golden light of the western sun; which, at the same time, illuminated the fresh green outline of every budding intervening tree, while their boles, in deep shadow, presented altogether a landscape which the most fastidious eye would have paused to admire.

At this point I could not help admiring the skill of the designer in thus hiding the entrance-gate and lodge from the windows of the house by a thick screen of plantation, which also serves the purpose of introducing the visitor, by a shady passage, to one of the best points of view, which from the first sight of the house is obtained but only partially, with a view to excite curiosity. A full display of the whole house, from a near point, would entirely destroy this feeling, besides detracting from its real consequence.

From this point the line of the approach trended rather to the right, in an easy sweep, but, as far as it could be seen in advance, always seeming to

point to the spot where the visitor, from his previous view, would conceive the house to stand : passing thus through open groves,—across winding glades, which allowed pleasing peeps down into the valley on the left, or towards a well-wooded country on the right hand ; now passing a herd of deer, or threading a flock of South Down sheep, which, together with black cattle, were scattered over the lawn ; proceeding through a succession of interesting scenes, along a well-designed and easy carriage-road, I spied at last through an opening of the trees before me an ornamented turret, with its gilded ball and vane, which I afterward found to belong to the stable-yard clock. This was a beacon announcing my near approach to the mansion : and so it proved ; for on passing through a thicket of lofty trees and holly underwood, the chaise entered under a high semicircular arch into a spacious court, surrounded by offices, stopping at the steps of the back portico of the house.

Alighting here, I was ushered through a lobby, across a splendid hall, into the drawing-room. Salutations over, my first impressions led me to the windows to have a bird's-eye view of the surrounding scenery ; the approach by which I had been conducted to the house having tended not a little to increase my curiosity. I had approached by a kind of "covered way;" and when I looked from the windows, scenery of the most enchanting description, far exceeding my previous anticipations, met my view.

Recurring to the design displayed in the approach, every one must approve of the taste with which it has been chosen. The line from the gate to the house varies but very little from a direct one: but being led along the brow of the valley, and very slightly ascending, it has all the advantage of the curve without being uselessly circuitous; a circumstance always to be approved. When the eye can travel much faster than the feet, the road is always tedious. Hence the discontinuance of the long straight avenues from the outer entrance gate to the front door of a house, seen in so many places formerly. Besides this, in the present case, the great variety of light and shade on the line of the carriage-way banishes everything like tedium from the mind of the visitor while proceeding along the approach. If the road had been led more to the right over the table-land, its curvature would have been increased as well as its length, causing an extra expense on the first formation; and, moreover, losing all view of the beautiful valley on the left.

If a more direct course had been chosen, it must have descended into the valley at the top, running along the bottom till nearly opposite the house, and ascending to enter thence by the back court; an arrangement which would have been productive of two serious inconveniences for carriages, namely, descending one hill merely for the sake of saving a few yards of distance, and at the expense of ascending another. Besides, a carriage road along a valley cannot be hidden by trees without filling

up the valley; a circumstance to be particularly avoided. It is for these reasons that the direction of the approach is the best that could be chosen; it is very nearly the shortest: it is sufficiently varied by grove and glade; no ostentatious display of the extent of the park is exhibited, but only as much as creates a desire to see more. This is very different from what appears to be particularly studied by some improvers; their object being, as soon as the outer gate is entered, to make a full and complete display of the whole domain at once, in order to make a strong and favourable first impression. But this is a futile conceit; for after the first view, the details can hardly be so interesting as if no general view had been previously given.

Whether the approach should lead to the back or to the front entrance of a house, has been a question much canvassed among improvers. The situation, aspect, and architectural character, and particularly the internal arrangements of the principal rooms, have generally governed the landscape gardener in this matter. If the aspect of a house has been fixed with the intention that the windows of the principal rooms should command the most interesting views or prospect of the surrounding country, then assuredly the principal entrance should be at the back front. This would give the architect more space and facility to arrange his suite of living-rooms, than if the house were cut asunder by a central entrance in the principal front. It is not uncommon, however, to see the prin-

cial door in the centre of the front, especially of villas near towns, and even in many noble houses in the country. One instance will suffice. Claremont, one of the most celebrated places in the kingdom, upon which both Kent and Brown are said to have been employed, is made as inconvenient as possible by having the door placed in the middle of the principal front; to which the carriage-road is brought not only with difficulty, but even danger, in order to mount a high flight of steps to gain the floor of the portico and that of the principal rooms. The ornamental grounds of this place are truly beautiful; and it is a pity that about so princely a place there should be any sign of a want of skill in the arrangement.

Entering at the back of a house is objected to, because the offices must be seen or passed; if they cannot be hidden, they only require an ornamental façade, and then it does not signify whether they are seen in passing or not.

The house called Fairfax Hall is erected a little way back from the point of a promontory which protrudes into the valley already noticed as lying to the left of the approach. The promontory widens as it recedes back, but separated from the higher land still further behind by a cross hollow at the top; so that the promontory forms a sort of triangle, containing an area of about ten acres. This is entirely occupied by the house, offices, and kitchen-garden; all enclosed in a belt of pleasure or ornamented ground, separated from the park by a *ha! ha!* fence all round except at the car-

riage-way into the back court, and a cart-way into the coach-yard at the bottom of the kitchen-garden.

The advantage of having the house and all its necessary appendages within a ring fence in the centre of the park, is the freedom it allows for riding or driving round the place without the annoyances of fences or gates. It also allows a freer view of the surrounding scenery of the park, distant country, and also of the different animals with which the park is stocked, without stepping off the dressed walks of the pleasure-ground.

The place, as well as the southern aspect of the house, has evidently been chosen for the command it has of the fine varied surface of the park, especially towards the south and westward. In the former direction there are smoothly-swelling banks seen across the valley, and mostly sloping towards the house. These are judiciously planted with forest trees, either singly or in groups or masses, rising one behind another in tasteful gradation; through which there are glades of various length and width. To the westward of the house, there is a deeper and wider valley lying nearly at right angles with the first; descending from the north, where it is hidden from the house by intervening woods, but reaching southward, and in view from the windows for a mile or two, is lost in a plain in the distance.

This last valley is the channel of a rivulet rising from springs on the high land lying to the northward of the house; and though but an incon-

siderable stream, it has been skilfully arrested opposite the house by throwing a dam across the valley about a quarter of a mile below, thereby expanding the rivulet into a beautiful lake of nearly five acres.

The idea of raising a dam across the valley, and by that means obtaining an expanse of water, was a very natural wish of a proprietor who had a painter's eye. A most interesting feature of the place has been created. The dam is so concealed by trees and bushes, that its artificial character is completely hidden; and though the excess of water be too inconsiderable to form a cascade of sufficient importance for full exposure, it may be heard on calm evenings gurgling away among some large and rough stones fixed in the lower face of the dam.

The banks of the lake, as well in outline as in height, are very irregular, though not fantastically so; the water, when first let on, was allowed to form its own outline, and of course varied according to the heights or depressions of the surface. Little promontories here and there jut into the water; some are bluff-pointed, and planted with trees and shrubs; others die smoothly off into the water level.

Alders, weeping-willows, and poplars, with reeds and other aquatic herbs and large stones, occupy the margin in irregular tufts and masses; and so naturally are these disposed, that no stranger would suspect that the whole is a work of art. Here are no "tame banks," to offend the

fastidious eye ; no parallel edges, nor canal-like form, to shock the feelings of the connoisseur. The surrounding land all dips towards the water, except only at the south end, where the surplus water steals away ; and this being contracted at the dam, and well flanked by planting, the lake appears embosomed in surrounding slopes on all sides.

This is the character which all made pieces of water should bear ; because if their surface appears higher or even as high as any of the adjacent ground seen at the same time, its artificial character is at once proclaimed, and its natural beauty impaired. The middle of the lake is so deep that it is a perfect fence against cattle wading across : and yet there are several shallow banks on both sides, at which the cattle drink ; frequently congregating in the summer months under the overhanging trees, to escape from their tormentors, the gad-flies.

The management of water is one of the most difficult operations of a landscape gardener's profession. Brown's great work of lake-making, at Blenheim, will transmit his name with honour to posterity ; but many of his minor attempts, as well as those of his followers, are perfectly *jejune*, and often ridiculous. In some places, small natural pools have been drawn out to represent a *winding river*, passing—no, but appearing to pass the drawing-room windows, but carefully concealing with evergreen shrubs and trees both its source and debouchure ; while the stillness, muddy

colour, and sluggish appearance of the water, betray, at a glance, its stagnant character. In some other places, the accidental ponds or small brooks are formed into a rectangular *sheet of water*, or curved canal, with neatly-levelled, smooth, and trimly-cut edges, as vapid and bald as a field of snow. Such doings are really childish; because whatever is done by a garden artist should either be boldly acknowledged as a work of art, and executed accordingly; or if nature is to be imitated, it should be on such a scale as not only to impose on a stranger, but to delight the eye and satisfy the taste of the proprietor, whose money has accomplished the work.

Besides the vivid reflections of the sky, and the deeper ones of the trees, and cattle, and other figures on its banks, the lake is useful in other respects, as allowing the pleasure of rowing, or sailing a cutter, and the amusement of angling; nay more, by using a draw-net occasionally, a fair haul of trout, jack, and tench may be caught to supply the cook; what are not immediately wanted being transferred to a lock-up stew, constructed at the head of the lake.

At the upper end of this piece of water, the scenery is pleasingly varied by a change of trees. The course of the rivulet above the lake is down a narrow dell, having rather steep banks. The carriage-road to the back entrance into the park passes over a neat stone bridge of three arches, near the head of the lake, whence the latter is seen to great advantage. The banks, both above

and for a little way below the bridge, are planted with Weymouth pines, which grow here luxuriantly, in consequence of their roots reaching the water, and ranging in the peat-earthly soil by the sides of the brook. A few weeping-willows skirt the pines, hanging partly over the water. The bridge so accompanied, viewed from any point below, appears in a recess, and looks extremely well, being decidedly connected with that element which renders bridges at all necessary. A bridge without water is like a ship in the midst of an inland city ! Sometimes, indeed, the mast of a sailing-vessel or a group of aquatic trees may be admitted into ornamental scenery, to mark the existence of water which cannot be seen ; but this device is seldom necessary.

The lake is peopled with a family of swans, as well as several sorts of wild-fowl, particularly in winter. The swans breed every year : a bundle of straw is laid on one of the little islets, which the hen puts in order, and lays, sits, and hatches two or three pairs of cygnets in the season. Twelve months afterwards the parents drive away their young ; and it is a good plan to remove them quite, as the old cob is a most relentless persecutor, especially to those of his own sex.

Below the lake are very rich meadows on each side of the brook extending to the outside of the park in that direction ; and the higher ground on each side is finely wooded. The whole of the higher ground beyond the lake as seen from the house is also finely enriched by masses and groups

of trees, from beyond the summit down in some places to nearly the edge of the lake, and extending northward out of view of the house.

The above-described scenery is almost all seen from the windows of the house, and also from the terrace-like platform in the centre of which the house stands. This platform is separated from the park by a ha ! ha ! which is built parallel to the outer walls of the house, and from which it is distant about thirty yards. The exterior face of the terrace has some little architectural character bestowed upon it. Pilasters at regular distances support a projecting cornice, surmounted by a low parapet and coping. At the salient angles there are outward breaks on each side, which add to the strength and massiveness of the whole when viewed from the park ; and as its pilasters correspond in some degree with the architecture of the house, the whole not only gives elevation, but appears, to a distant spectator, to be the actual base of the building.

The platform is diversified by smooth walks and turf, a few elegant trees and flowering shrubs, and numerous plots of flowers. These, however, are all so disposed as not to mask the windows or obstruct the views down into and across the valleys to the opposite and distant scenery of the park and surrounding country. The space is divided by a straight walk leading from the south door of the house to a flight of steps at the other end which descend the ha ! ha ! and fenced by an iron gate. This is only an occasional outlet for com-

pany wishing to stroll in the park, or for equestrians wishing to mount or alight there. Very few trees are planted on the platform, for reasons already given. An acacia (*Robinia pseudacacia*), at one angle of the house, and a deciduous cypress (*Taxodium distichum*) at the other, with two or three others of equally light and elegant forms, are planted at the sides. These, together with some low evergreen shrubs, are placed to flank some of the vistas across the park, and always backed by groups of trees planted on the slope outside of the ha ! ha !

The advantages, convenience, and beauty of this disposition of the terrace are manifold. The cheerful airiness and light afforded to every front window and room in the house ; the highly dressed surface without, corresponding to the elegance and comfort within ; the pleasing ideas of security arising from the impassable fence by which it is inclosed, together with the freedom the terrace allows of observing the face of the sky as well as that of the earth—are all circumstances of the most gratifying kind, and indispensable to a country-seat.

How the father of the present proprietor contrived to resist the fashionable taste of his day unmoved by the prevailing opinion that terraces were deformities, cannot be accounted for otherwise than by supposing that he thought for himself, and would not give way to new-fangled notions which had no rational basis either on the score of scenic effect, propriety, or convenience. The result, however, of his non-compliance, is the preserva-

tion of one of the finest features of the place; admired by every one who can appreciate convenience and propriety as ingredients in the arrangements of a country-house.

Besides the walk round the exterior of the terrace, another one of equal width surrounds the house at a distance of about five feet from the palisades of the area; these walks unite at the back corners or northern angles of the house, and lead away into the pleasure-ground both ways. At these points there are trelliage entrances bespanning the walk and extending ten feet on each side, covered by the finest hardy climbers.

It has already been observed that the sunk fence or ha! ha! embraces about ten acres, occupied by the house, offices, and gardens; and these are arranged in the following order:—The house and terrace occupy the south point; next behind is the upper or kitchen court of offices; then the stable and coach-house court; next is the melon or frame ground; and beyond this is the kitchen-garden, with hothouses, gardener's house, and orchard at the upper end; the whole surrounded by a belt or border of dressed ground of varying width.

To give an idea of how this last is laid out, the leading walk may be traced; so proceeding from the trellised entrance on the east side, we first pass northward through a close thicket of evergreen shrubs and trees; of the latter a few are deciduous, but the chief are very large and lofty hollies. This group of trees is a screen to the offices from any point to the southward of the house, and a link

to connect the latter with the other scenery and objects of the park.

In passing through this thicket, the first object that attracts attention is a light and elegant iron bridge or viaduct, of one arch, over the carriage entrance into the back court. Both banks of this artificial ravine are thickly planted with evergreen shrubs and trees, which nearly meet over the road. The floor of the viaduct is nearly level, but sufficiently elevated above the road to admit the highest loaded carriage; its ends and abutments are sunk and concealed among the foliage. Advancing onward, we pass through another thicket of evergreens: these thickets have a double value; they not only serve to hide the offices, but very much enhance the effect of the open scenes to which the walk leads; for as soon as the last thicket is passed, we rather suddenly enter a most interesting open space laid out as a flower-garden. The west side of this open space is thickly planted with ornamental trees and shrubs, diminishing in height from the back against the kitchen-garden to the front. The east side, next the park, is more thinly and irregularly planted, and apparently associated with the groups on the outside of the ha! ha!


In the middle, though not exactly central, as it is rather nearer the west than the east side, stands a very handsome greenhouse. It is a parallelogram in plan; ends and sides square, and covered with a double-pitched glass roof, but which is hidden by the entablature of the structure. It partakes

of the architectural character of the mansion-house; the uprights of the front and ends are made to resemble pilasters, and, what with a cornice, and prevalence of horizontal lines, shows the connexion. It is well adapted for Chinese, Australian, and South African plants; the collection being rather select than numerous. The site of the greenhouse is rather elevated, and the general surface of turf lies in a kind of semicircular hollow, round the east end of the building at the distance of about fifty yards. The surface is skilfully varied by groups of small trees, shrubs, and knots of flowers, the largest and highest of each being most distant from the east end of the building—which may be considered the central point of view, and with reference to which the principal masses have been disposed. A view from this point commands a principal part of the flower-garden, together with the various forms and colours of the flowers and foliage, the different gradations of the respective heights, and the beautiful play of the turf winding among and dividing the groups of plants from each other, is altogether a very pleasing association of vegetable beauty. The plots of shrubs and flowers are of very many forms, but neither exactly regular, nor fantastically irregular. Narrow glades are preserved to give apparent scope; but no formal lines except those of the beds and building obtrude to give an idea of stiffness or unnatural control.

Besides the greenhouse, the flower-garden contains raised beds for hyacinths, tulips, ranuncu-

luses, anemones, stages for carnations and auriculas, &c.; also a circular basin for gold-fish and aquatic plants.

On first entering the flower-garden, the leading walk is divided: one branch leads to the right, inclining towards the sunk fence, and afterward onward, falling into the leading walk beyond the flower-garden. The other branch trends round to the flower-beds, the greenhouse, and basin; the principal direction being to the left or behind all these, and then bending to the right till it meets and joins the other branch at the north-east corner of the flower-garden. Before bending to the right, however, a branch from it leads nearly right forward to the end of a finely-secluded and shady walk between two ranks of lime or linden trees, (*Tilia europæa*), planted about thirty feet apart, and whose arms are intermingled overhead. They form a short avenue, parallel with the east wall of the kitchen-garden, and terminated by an ornamental trellis forming an alcove over a seat. The trees stand upon borders of mossy turf; and their columnar boles are backed by dense masses of evergreen trees and shrubs; which, while they render the walk perfectly secluded, add a pleasing kind of quiet stillness, particularly suited to the contemplative mind. As a shady walk when the heat of the sun is oppressive, it forms a grateful retreat; and a pleasing contrast to the cheerful brightness of the flower-garden, affording repose to the eye as well as the mind. If this avenue were longer, it would be less pleasing; but its



disposition being the prototype, it has all the air and grandeur of the middle aisle of a cathedral, and all that imposing kind of effect arising from the elevated canopy sustained by and springing from the two ranks of trunks.

This avenue would, however, be imperfect, had it no ostensible and useful termination : but this is avoided by the erection of the trellis-work already alluded to, and its use consists in its being furnished with a sofa-like seat and a table ; and at each end, in semicircular niches, are placed Etruscan vases on pedestals ; and on the top, three smaller ornaments of the same kind.

From the alcove two walks branch off at right angles ; one into the kitchen-garden, and the other into the pleasure-ground. When the avenue is used as an approach to the flower-garden, which it may be in returning to the house from the kitchen-garden, or from the pleasure-ground opposite the alcove, the sudden burst from the avenue into the parterre is a pleasing transition, in consequence of the variety of objects and gay colours which at once strike the eye.

Respecting this avenue, it may be added that it does not seem to be a part of a longer one, or that it has ever been used as an approach to the hall, but planted for the sole purpose of a shady walk and place of retirement, and also to form a distinct feature and thereby add to the other interesting parts of the pleasure-ground.

To proceed on the circuit of the dressed scenery, it is necessary to return to the leading walk at

which we left the flower-garden behind. Here we enter among the lofty trees, springing out of a base of shrubs, chiefly evergreens, forming together a sheltering verge round the north end of the flower-garden. Through this verge the walk is rather shady and confined, and so continues for about fifty yards, but gradually opens into a spacious open grove or arboretum, containing all the more choice sorts of forest-trees, some of them of great size and beauty. The trees all stand on turf, and are disposed in no regular order, the largest growing sorts occupying the largest spaces, and the lower growths irregularly intermixed. Of the first, the oaks, beeches, platanus, limes, Spanish chestnuts, and tulip-trees are magnificent, many of their lower branches sweeping the ground. The lower-growing species, as the American oaks, maples, magnolias, styrax, catalpas, cedars, cypress, &c., are interspersed in the intervals between, forming various openings, little glades, and interesting groups, which to the observer in passing are constantly shifting in their combinations, and producing the greatest variety, as well from the tints and character of the foliage, as in the ramifications, positions, and general aspect of the trees.

The limes, platanus, cypress, larch, and chief of the coniferæ are naturally, and some of them beautifully, formal. The acacias, white hickory, deciduous cypress, and some of the maples, are lightly elegant; and the oak, Spanish chestnut, and the cedar of Lebanon are majestically pictur-

esque. But it is impossible to give anything like a perfect idea of this grove of trees. To the philo-arborist it is interesting, and serves the purpose of the general planter by enabling him to choose trees by their comparative merits whether for use or ornament. An open grove of noble beech-trees in the park approaches near to the ha! ha! in this part, and associates well with the arboretum within, so as to give extent to the latter, without any offensive line of separation.

The leading walk does not pass through the middle of the arboretum, but keeps trending towards the sunk fence on the right, and after passing through among the single trees, pierces a thicket of shrubs and evergreen oaks on the brink of the fence, at which we enter into a very different kind of scenery, namely, the view of a fine and extensive glade across the park. It is an ascending hollow, of which the further end is not seen, as it winds round a beautiful knoll, on which stands an ornamental cattle-shed, and over a dip to the right are seen the church spire and some of the other buildings of the next post-town, and beyond these the summits of the Chiltern hills bound the view. The direction of the glade is not only marked by the descending and somewhat winding hollow, but is tastefully flanked by imposing masses of wood, which advance or recede variedly along the brows as the undulations of the sides seemed to allow; exhibiting all those stronger and fading lights so interesting to the admirers of landscape. There is a seat at the

point where this glade is first seen from the walk, and its imposing extent and striking features, when chequered by shadows and enlivened by flocks and herds, well deserves a pause to contemplate its varied beauties.

From the seat whence I have been noting the above particulars, the leading walk is carried parallel to the sunk fence, and has here all the advantages and character of a terrace. As such it is extended quite across the glade till it enters the flanking plantation of shrubs and trees farther to the north. Passing through this, we have another interesting change of scenery. The high ground to the northward is densely clothed with fine timber trees, rising in beautiful gradation from the sunk fence at the north end of the pleasure ground up to the crown of the hill. This wood forms the back-ground to a fresh feature, which, compared with what has been yet seen from the pleasure-ground walk forms an agreeable contrast. On the north side of the orchard there formerly existed an old gravel-pit of considerable depth, and in area about three quarters of an acre. This was in the way of completing the plan of the pleasure-ground, but it was wisely and tastefully determined to include it within the sunk fence, and a very ornamental thing has been made of it; proving the truth of what is said to be a rule in the practice of landscape gardening, namely, when a scar deforms a scene, the best cure is either to hide or ornament it. This last has been judiciously done to the pit in question. As it was

known that a stratum of clay lay below the gravel, the idea of filling the pit with water readily occurred, and was easily carried into execution. The abrupt banks on the north were left untouched, except inserting a double stratum of rough stones round high-water mark, and the crest raised with good soil. After leaving a little island near the middle, planted with weeping-willows, and making a shore on the south side (allowing the water to mark its own level to produce an irregular margin) the whole was planted round with trees and shrubs.

This little lake, in the tasteful way in which it has been managed, has all the appearance of a natural feature. The reposing in the lowest place, and surrounded by trees and overhanging shrubs, intermixed with birch, poplars, alder, and willows, gives the whole a natural aspect: and besides, admits several aquatic trees, shrubs, and flowering herbs, which would be misplaced in any other part of the dressed grounds.

It may be necessary in this place to say how this little lake, the garden, domestic offices, and the house itself, are supplied with water. The source is a natural pond, fed by never-failing springs, near the top of the high ground to the northward of the place. From thence all the supplies are brought in one underground main: having branch pipes and cocks for every department, thereby saving all the labour of pumping that indispensable element.

The leading walk carries us round on the outside of the lake, or *aquarium* as it may be called ;

and opposite the middle of it, and partly under the trees and shrubs, there is a ridge of rugged stones, formed for the reception of rock or alpine plants. This site being near water, and having a north aspect, is well calculated for the growth and preservation of those minute, yet beautiful, plants. The situation of this rude feature is also appropriate, as it cannot be seen at the same time with any thing that is soft, or gaily dressy; for when such a rough feature is introduced into a flower-garden it is rather a discordant association.

A branch of the principal walk diverges at some distance before reaching the aquarium, and passes in an easy sweep on the south side of the pool among various clumps of flowers, and ever-green shrubs on the turf: falling in again to the leading walk at a corresponding distance beyond.

At this point the perambulator turns southward on his way back to the mansion-house. This side is less varied than the other, but there are numerous fine specimens of trees and flowering shrubs, mostly on turf. Looking across the ha! ha! as we pass along, there is nothing particularly striking except very fine timber trees, which stand rather thickly on this brow of the western valley. Presently, however, we have an occasional glimpse down towards the lake, with the flickering reflections from the ripple on its surface, which is an inducement to obtain a more uninterrupted view.

Proceeding onwards, and still over highly dressed ground to the right and left, furnished

with trees and shrubs, we arrive at an open space on the brink of the ha! ha! where the walk encircles a venerable elm, having a fixed seat round the base. This termination of the walk to the ha! ha! is necessary; not only to give greater breadth of shrubbery to involve and conceal the drying-ground attached to the laundry opposite this spot, but also for the enjoyment of a most delightful prospect from the seat just mentioned. From this station the greater part of the west valley, with its lake, the richly-wooded brow beyond, and the meadows through which the stream steals away after its escape from the lake, are all seen to great advantage. It is a scene of unmixed beauty; the softly waved undulations of the surface of the higher ground forming gently swelling knolls and easy falls—the groups of deciduous trees crowning the heights and spreading down on the slopes, with the holly or juniper creeping out from under them—the single trees irregularly, but not too lavishly dispersed,—the lake, with its varied margin of trees, its islets, and boat-house, and swans—and the whole of the lawn enlivened by deer, sheep, and black cattle, as well as a view down the valley of the distant country, forms altogether a landscape of the most attractive description.

Falling again into the leading walk, we are now approaching the west side of the house, and in our way pass through the orangery. This building, except a base of brickwork about four feet high, is entirely glazed, and bespans the walk,

and is just wide enough to admit a row of orange-trees on each side in square boxes. In the middle there is a circular space, matted, with table and chairs ; which forms, when the weather allows, a very pleasant sitting-room. The building is rather shady in summer, a few acacia-trees rise from among the shrubs on the west side, rendering it quite suitable for orange-trees, which delight in a warm shade ; there is also a fireplace within, but it is only used in times of hard frost.

Quitting this building, a few steps brings us upon the terrace through a trelliage entrance, similar to the one on the east side of the house, and thus completing the circuit of the home or pleasure-ground walk.

It is generally admitted that the pleasure of equestrian exercise, free from the dust and constant annoyance of a public road, is one of the highest gratifications arising from the possession of so extensive a park as this. A morning ride over the drives of the park and adjacent farm is a great treat. The latter is laid out on the plan of Shenstone, having green headlands, hedge-row elms, and groups of these and other trees in many of the corners of the fields, which last are traversable by either riders or drivers :—but of this more hereafter. The park is a delightful field for enjoying a quiet ride ; no obstructions of gates or fences (unless it be desirable to pass through the coppice, of which there are several large inclosed pieces maintained, as well covers for game as for supplying the place with underwood stuff),

nor are you, except in those coppices, condemned to keep a beaten or prescribed track, but with all the freedom of an inhabitant of the air, you can turn wherever fancy leads, or to whatever object that may attract your attention. Should you wish to look out upon the surrounding country, you have only to gain some little knoll or eminence which surmounts the park pales. If the heat of the sun be oppressive, you may thread your way through the open groves, or wind your course along the shady side of the glades. Here is no continuous circumscribing belt to confine and drag along the listless perambulator, impatient of such control; no obtrusive barrier or menacing boundary to check your steps. In short, the ever-varying combinations of woods and lawn are so pleasingly disposed, that you are instinctively, as it were, led from scene to scene with increasing interest, to the point where you set out.

This style of enriching and embellishing the outskirts of a park is infinitely preferable to surrounding it with a meagre strip of plantation, called a *belt*, as practised by Brown and his imitators. This indispensable appendage of the Brownian style of improving a park by planting, had three very obvious faults; it was always too long, and too narrow, and in general, being planted with the same variety of trees regularly intermixed, had always a tedious effect whether seen from within or without. The belt seems to have been adopted at first as a means of marking more ostensibly the extent or boundary of the park, and

as a sign of the appropriation of the land it circumscribed, to the more immediate use of the proprietor. The idea of leading a ride or drive through the belt was very natural, because it not only afforded one of the greatest possible length within the park, but also allowed the proprietor an opportunity of observing at pleasure the progress made by his young trees.

When belts were young, they were much less an eye-sore than they became after fifteen or twenty years' growth; the trees then began to get naked at bottom, and the sky being seen through the bare stems, declared at once their destitution of two of the principal beauties of a wood, namely, depth and massiveness. And as the belt very frequently occupied the highest ground or horizon, they became exceedingly meagre and ugly, and of course were condemned by every eye of taste.

This, at one time a very fashionable feature, together with its defects, has been studiously avoided in planting the park now under review. The real boundary, or park paling, is never visible from any commanding station; and is generally placed on lower ground than the surface of the park immediately within, or otherwise hidden by bushes or low trees. This gives a freedom to the eye in riding round the verge of the park; and as the plantations are variously placed, as regards their distance from the real boundary, no idea is given of its proximity by any lineal disposition of the trees.

It is impossible, however, to convey by description anything like a perfect idea of the beauty and great variety of ever-changing scenes which strike the eye and arrest the attention of the beholder, in making a tour of Fairfax Park. The advancing and receding masses of wood ; the opening and closing of the glades and vistas sometimes extending quite across the park, or shut up at shorter distances, ever shifting with the position of the spectator, are circumstances which constantly employ and please the mind of the perambulator.

It is this circumstance, together with the motions of trees and animals, which renders real scenery so superior to that which is painted ; though this is not always allowed by the painter, who boasts that he can arrest every moving body at the instant they present their finest attitudes, which, says he, cannot be done, or hardly kept in mind, by the observer. Be this as it may, the various objects of still life, as well without as within the park, serve to heighten the value of the sylvan scenery. Within, there are several well-proportioned cattle-sheds ; now and then we have a glimpse of the mansion house, or of the lake, with its accompaniments ; and in many places there are sheltered or shady seats for pedestrians. Every object of interest in the country around may be seen from one station or another from within ;—such as castles, churches, or distant prospects. So that, while enjoying the ideas of privacy and security, perfect freedom, at the same time, is allowed to the roving eye.

The rides or drives in the park are considerably extended, by gates in various directions, opening to the country around, but particularly into the farm already mentioned. This is a very complete concern of about two hundred acres, kept in hand for the service of the establishment; and is managed by a steward who resides at the farm homestead, about a mile to the northward of the hall.

The management and stocking of the park is very intimately connected with that of the farm. It is necessary to mention this, lest the reader should imagine from the descriptions previously given of the former,—of its groves, and lakes, and rides, &c., that the whole is a large expanse of *barren* pleasure-ground. But this is really not the case; for the park is almost as valuable and profitable as the arable land; for without its assistance the farm could not be cultivated with much advantage. It enables the steward to keep a great number of profitable live stock, whence ample supplies of the richest dress are afforded for the arable land, which in consequence is doubly productive. All the meadow hay consumed on the estate is grown in the park; a line of iron hurdles divides the meadow ground, below the lake from the high pastures, nearer the house; and remain till the hay is cut and carried.

A complete country seat is composed of many different parts, all contributing to the comfort and convenience, as well as to the pleasure and profit of the possessor. Without such arrangements

which it is the province of the architect and landscape gardener to create, and which always have a tendency to ensure every domestic, as well as out-of-door convenience, no honour can redound to the designers, nor satisfaction to their employer. The useful must be so blended with the ornamental, that no sacrifice should be made entirely for the sake of the latter, nor should poverty of design, or imperfect execution, be suffered to disfigure the natural beauties of the place for the sake of the former.

Here, indeed, the lake may be objected to as a waste of good meadow land, and so it is ; but when we consider how much the beauty, and consequently the value of the estate is enhanced by the existence of such a splendid feature, no one can deem it an extravagant luxury : so long as it contributes to the rational gratification of the possessor.

These particulars, as well as a few others which remain to be noticed, and which belong to a well-designed country seat, show how many things should engage the attention of a landscape gardener, when employed to arrange and lay out a new place. It used to be considered that the decorative part was the only proper province of the ground-workman, ground-improver, landscape gardener, or whatever other title he assumed ; that his special business was only to beautify the place by planting what was naked, smoothing what was rough, putting in order irregularities, or curving what was stiff and unsightly :

in short with nicely lined gravel walks, and turf to give a dressy or *holiday-look* to every place or thing he touched ; and all this only in the immediate vicinity of the house ; and which when completed was called the flower-garden, or pleasure-ground. Such was generally considered the principal duty of a landscape gardener ; but a visit to such a place as Fairfax-hall shows, that this delightful art involves matters of much greater moment than forming walks, or planting trees or shrubs.

A beautiful country residence is an enviable possession. Its situation and beauty often constitute its chief value ; but beauty alone is not enough : more especially as it need never be unaccompanied with more substantial excellences in the country. There is a lasting gratification to the proprietor who has embellished his country-seat to his utmost satisfaction, and is sensible that no sacrifice has been made of its local or real value ; when he annually finds that the returns from the productive parts cover all the expenses of those which are unproductive ; when, in fact, the land-steward pays all expenses of his gardens, of his park, and of his stud, besides supplying the family with every description of farm produce. These are material items to the country gentleman whatever his fortune may be : because, besides saving, there is a peculiar pleasure in being independent of markets, and especially of bakers and butchers.

With such views has the estate of Fairfax-

hall been designed ; for such are surely the effects of the well-balanced disposition of the *sweet* with the *useful*. That the place has gradually become what it is, sufficiently proves that the general plan has been well conceived and executed. The *genius* of the place has been studied ; the general surface, as repeatedly observed, is gently undulating, and consequently simply beautiful. With this character, it was required that everything superinduced should correspond, and this has been done with great judgment. The simple Grecian style of the buildings, the light elegance of a great majority of the most conspicuous trees, and the general smoothness of the turf, all combine to give the idea of unmixed beauty. Nothing bearing a picturesque character would have been admissible here. A castellated or a gothic mansion on such a spot would have been horrible ! nor would all the art of man have been competent to mould the natural features of the place, so as to harmonise with the frowning aspect of such an object. And yet we often see such anomalies committed ; but it is in bad taste ; and the architect who could suggest or design such incongruity is unfit for his profession. It must be admitted, however, that it often happens that the employer fixes the style of architecture himself ; he resolves to have a castle, an abbey, or an Elizabethan mansion, to live in, without in the least considering whether the character of the place be or be not suitable for the

style he proposed for himself. And thus it is that many absurd associations are executed merely for the want of a little ready-made taste.

It is the unity and comprehensiveness of arrangement which renders Fairfax-hall at once so beautiful, convenient, and so profitable. Each department of house, gardens, park and farm, stud and game, has a special superintendant, who attends to his own duty without interference with others.

We have noticed the principal entrance, or what is called the London gate; but there is a back or second entrance, which is on another road leading across the country, and remains to be mentioned. This back entrance gate lies in a north-west direction, at the distance of above half a mile from the house. The carriage road to it from the house passes round the gardens, and down to, and over the bridge at the top of the lake, and from thence through a wood onwards to the gate. This gate is in a similar plan to that of the principal one; but both it and the keeper's lodge adjoining, are in a somewhat less ornamented style. The keeper's house is a roomy and comfortable dwelling—not a mere architectural *box*, like too many of those diminutive polygonal whims called porters' lodges, so frequently seen in every part of the kingdom. Attached to it there are various buildings, as kennels for dogs, and a compact yard and sheds for fattening a few deer.

In describing the leading walk round the gardens, it was omitted to mention that there is

another viaduct over the cartway which opens into the coach-yard. It passes through the group of trees and shrubs at the south end of the flower-garden; and is particularly convenient for carrying on what is wanted for the garden, for the stables, the coal-cellars, and the ice-house, the door of which opens into this court.

The situation of the house allows the most perfect drainage: the never-failing supply of water from so elevated a source; the convenient arrangement of all the domestic offices renders the residence particularly commodious. The beauty of the gardens and park, and the well balanced connexion among the different departments of the establishment, makes the seat a perfect model for imitation wherever such a design is practicable. But it is to be observed, that it is not every place which affords the same facilities for such a disposition of parts, as has been executed at Fairfax-hall. The natural features and circumstances of the estate seem not only to have pointed out, but actually compelled the execution of the dispositions; for any other arrangement would have at once been more expensive, less convenient, and certainly less beautiful.

M———N ABBEY.

THIS is a celebrated country seat and highly improved by the proprietor, a gentleman of the most correct and polished taste. A part of the original buildings as they stood in the reign of



THE ARREY FROM THE BOTTOM OF THE LAWN.

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Henry VII. still remain ; and a principal new part has been lately added, and finished in the style of architecture in which the abbey was first built. Its situation is in a narrow valley, and on the bank of a lively little stream. We enter the place from the northward through a lofty gothic arch and massive iron gates flanked by high walls. The appearance of this entrance gives the idea of security and seclusion, and as such is perfectly in character with the place. Proceeding along the approach to the house, the visitor is kept a considerable time in suspense by passing through a dense thicket of lofty trees and holly underwood, causing around a solemn gloom, till he arrives at the end of a fine gothic corridor, which leads to the principal door of the abbey. This approach is very well managed, for passing through twilight from the outer gate, and coming so suddenly upon an imposing mass of building, *composed* and ornamented in Bernasconi's best manner, strikes the stranger most forcibly ; on entering the apartments, we are surprised at their amplitude, and the massive character of the furniture and at the fittings-up of the interior. Every object within reminds you of old fashions, and of times long past ; at the same time every thing is designed with a view to perfect convenience and comfort, or what may be called substantial elegance.

There is no prospect seen from the windows ; the views from each being 'confined, and only penetrating a little way into the depths of the

surrounding woods, which are chiefly composed of oak, pine, fir, cedar, and other sombre-tinted trees. There are several acres of fine turf round the house; on which stand a few immense oaks, two or three cedars of Lebanon, and some very ancient mulberry trees.

It appears from the mounds still traceable about the buildings that they were once surrounded by a moat; the usual appendage to religious establishments in early times. This, however, is now all filled up except the side to the eastward of the abbey, along which there remains a part of the ancient terrace-walk and parapet-wall now washed by the stream. From this terrace a stranger perceives, for the first time, that the river issues from under an arch nearly opposite the corridor before-mentioned, and that it is tunnelled under the approach, in order that no anticipation of the existence of water may be had till it is seen in connexion with the abbey.

The kitchen garden lies to the westward and somewhat in the rear of the house; between which and the latter, are the stables, laundry, gardener's house, and other offices. The garden is walled round; and at the south front abutting on the lawn there is a bit of pleasure-ground planted with shrubs and flowers, separated from the lawn by a wire fence.

The view from the south windows looking down the valley, with the river sparkling here and there, and bounded by lofty woods on each side, is very interesting; but the view

from the lower end of the valley upwards is a scene of a purely picturesque character. From this spot the abbey appears in all its grandeur. Occupying a little eminence in the middle of the valley ; its various buttresses, pinnacles, turrets, embattled parapets, and copings, and projecting mouldings, with their deep shadows, together with the glistening vanes of the turrets, altogether present an object of the most fascinating character ; and being embosomed in "tufted" headed trees, contrasting well with the prevailing perpendicular lines of the gothic architecture ; produce on the whole a most interesting scene. Besides the principal object, there is the irregular river winding along its abrupt banks and natural channel—in one place rippling over a pebbly shallow—in another arrested in a glassy pool—giving animation ; while the stately and venerable trees which skirt the woods on each side, overtopped by the pines and firs which crown the heights, seclude, while they appear to protect, the principal object of the picture.

The site of this ancient place, like all others of the same character, commands all those circumstances which were at the time of their foundation considered indispensable—namely, shelter from the rigour of a northern climate ; a command of water, by which in those turbulent times, the buildings and residents could be secured by a deep moat passable only by a draw-bridge ; at the same time the moat served as a stew and nursery for fish, so necessary to a catho-

lic ecclesiastical community. The land in its immediate vicinity being, like the bottom of all valleys or sides of rivers, exceedingly rich, answered well for kitchen gardening, and the culture of fruit trees, so necessary also for such establishments.

In modern times, when a country residence is intended to be built, the choice of a proper site requires a good deal of consideration. On a first survey, it often happens that the most beautiful part to look at from a distance is recommended as the best station for a house. This, though a very natural, is a deceptive impression; because the beautiful ground cannot be all seen from the windows of a house built upon it. If, indeed, a proprietor wished to make his house an eye-trap, to arrest the attention or provoke the envy of the public, or to form a fine picture for himself to take a walk or ride to look at; then he has only to place his house on some commanding brow overlooking the turnpike-road; but he, it is probable, would have cause to repent placing his house on the most beautiful ground as soon as he looks from its windows.

It is very often remarked by those who have not studied the subject, when they see a house surrounded by beautiful hills, that it is misplaced, conceiving that if it had been placed on the higher ground it would have looked better. So, indeed, it might, if the house as a piece of architecture be only considered; but as much more beautiful scenery may be formed on a rising surface, than

on a declivity, no one would sacrifice pleasing views as seen from the windows upon an ascending surface for any upon a descending slope, which the residents must go abroad to see.

But on the other hand, as the love of prospect is said to be an inherent principle of the human mind, a mansion built on a commanding eminence has certainly most attractive advantages. Where the surface sinks away from the windows, and they command a distant horizon, circumbounding an extensive tract of country, stretched out like a map before the spectator, with all its interesting objects of towns, villages, public and private buildings—such a range for the eye is at all times most gratifying; and though the lord of such a house or castle so situated, unlike the proprietor of a secluded house, may see but little he can call his own, he has the privilege of overlooking that of others.

Both situations have advantages peculiar to themselves, and these are differently regarded, according as the proprietor is an admirer of extensive prospect, or content to sojourn in—

“An unseen, unseeing dell.”

The abbey which we have been describing belongs to the latter style of places, and as a *quiet retreat* is most perfect of its kind. It is completely shut out from the rest of the world—a sort of extra-mundane abode; the history and character of which is ever exciting a train of ideas

concerning events, and customs, and opinions of other days. A retrospect will bring to mind the time when an abbey was governed by a lordly abbot, attended by a number of monks, and other clerical attendants, besides seculars and servants, all supported by princely endowments and revenues for the practice of devotion, for disseminating true religion, for relieving the poor, and sheltering the weary pilgrim—all long ago suppressed; the clergy and their servants turned adrift, and the revenues fallen into other hands.

Some of the most extensive estates, and many of the most splendid private mansions in these kingdoms, are the remains of those ecclesiastical establishments. Some are converted into noblemen's palaces, others are baronial halls, and very many are now only farm-houses; but wherever such vestigia are met with, whether those of abbey, monastery, or priory, there we are sure to find these valuable concomitant circumstances—namely, a fine situation, rich land, and pure water. That these circumstances should always accompany the remains of those establishments is a proof of the care which was bestowed in the selection of the most eligible sites, the consequent cost of their erection, and subsequent endowment. To found and endow a religious house was, in those days of high religious feeling, considered as the highest instance of Christian zeal, and the most excellent act of Christian duty.

But these establishments though grossly mis-

used while in existence, introduced indirectly a few national improvements, of which we still enjoy the advantage. Ornamental gardening was introduced by the Italian monks; and many fine varieties of orchard and wall-fruit, as well as methods of culture, were brought over by the natives of France and Germany. The Italian and Dutch style were first executed in the gardens of colleges, and in those of ecclesiastical corporations. The avenue, the clipped evergreen hedge, the geometrical parterre, the terraced garden, with flights of steps in the open air, were all designed by foreigners, and their designs copied into the private residences of the nobility and gentry in many different parts of Britain, the remains of some of which remain to this day; but not being approved by modern taste, they are rapidly disappearing.

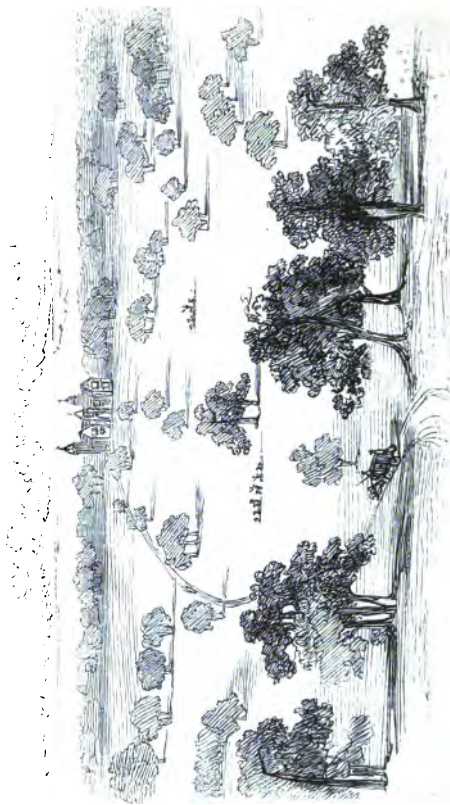
Several of the French pears and grape-vines, introduced about that time—that is, during the reigns of the seventh and eighth Henrys, are in all probability still in our collections; and certainly many of our culinary, and medical herbs and flowers.

The proprietor of ——— Abbey having improved the mansion without destroying the gothic style of the building, does not intend to make any further alterations either of the river or of woods, by which the house is nearly surrounded; thinking that the natural course of the first, and the seclusion of the second, are more in consonance with the original style and name of the building,

than if the woods had a more light and airy effect, and the river more exposed by smoothing banks. This undoubtedly is good taste ; and very different from that which would be recommended by a " capability " improver ; who would very likely advise him to get rid of the old gate and high wall at the entrance, substituting one of a much lighter description, and add a trim porter's lodge. He would greatly thin the gloomy thicket of trees within the gate ; pull up the tunnel through the same thicket, in order to expose the stream, by widening the channel and clothing the neatly sloped banks with smooth turf. Over the exposed stream he would throw an elegant bridge to lead to the front door ; clear away the terrace-walk and wall against the river in order that the bank might be regularly sloped from the base of the building to the edge of the water, and that the stream should be seen from the windows. The natural banks of the river, lower down, he would advise to be levelled, and the course made serpentine, planting two or three trees at each prominent bend of the river.

The woods which cover each brow of the valley, the modern improver would consider too hedge-like and heavy ; and, consequently, would advise the woods to be cut through in various places to break the continuity, and throw them into separate masses. All these alterations, he would say, would give the whole place an air of gaiety and cheerfulness which it has not at present. This much might be granted ; but a question fol-





B——L COURT WHEN FIRST SEEN FROM THE APPROACH.

lows—would not this smoothing of the surface and dismemberment of the woods injure the natural character of the place? The style of the architecture and name of the residence seem to require that its accompaniments should have somewhat of a solemn effect; and its natural situation seems to demand that even the garish eye of day should not disturb its character of seclusion. And though it may be quite true that many would approve of such a place being made as gay as possible; yet seeing that no distant prospects can be commanded from the windows, its present management and accompaniments are more harmonious as a whole, than any practicable alterations could possibly make it.

Thus it appears that the predominating natural character must always be considered in forming or improving the scenery about a country-seat; for this will render everything which is proper to be done much easier accomplished, than endeavouring to change the natural character, whatever that may be.

B——L COURT.

THIS is the family seat of one of our most ancient families of distinction, and long enrolled among our nobility. The park, which is walled-in, contains above five hundred acres, and is well stocked with deer and other cattle. It is entered through massive and curiously wrought iron gates, hung between square stone piers, surmounted by lions

rampant supporting shields bearing the family arms.

The porter's lodge is on one side, within the wall, and is a roomy building, covered with a steep roof of thick grey slate, with dormer windows, ornamented gables, and twisted chimney shafts. Both the gate and lodge give ideas of antique stability; and which ideas are well kept up by the view of the scenery within. The trees on both sides of the approach for a considerable distance inwards from the gate are very large aged oaks, many of them in a state of decay; but notwithstanding this, their venerable appearance adds an air of dignity to the domain. Many of them are covered with ivy to the very top: and though this ever-verdant climber seems like an encumbrance on its aged supporters, the union evinces a connexion of many bygone years.

Proceeding onwards, we reach an eminence which commands an extensive view of the park and mansion house, the latter being seated on an opposite brow nearly a mile from the spot whence it is first seen. From this station it is easily discernible that an avenue of oak trees had, at some former time, connected the entrance gate with the front court of the mansion, because, although its continuity and close array are broken by a great number of the trees having been felled, those that yet remain show plainly the ancient ranks of the avenue.

This destruction of the avenue, whoever might have suggested it, is in this case certainly an

improvement; because in the first place, it too visibly divided the park into two parts, and the lineal arrangement of the trees was so unlike the natural or accidental disposition of those of the same kind on each side, that there could be no harmonious association. And as the avenue was condemned as an ornamental object, and abandoned as a useful one, a new approach has been made in a curvilinear direction to the left of the old avenue, first descending, and afterward ascending towards the left-hand angle of the mansion. This line of road is well designed, as every part of it trends in the direction of the house; and from the point whence it is first seen its general outline is rather graceful than otherwise; and as the direction is obliquely down one slope and up the other, the labour for carriage-horses is rendered easy.

At the time when avenues fell into disrepute, many lovers of trees lamented their fall, and remonstrated loudly against the slaughter of so many fine specimens; offering much advice on the practicability of destroying the avenue, but saving the trees. This was attempted by first dividing the avenue into irregular-sized groups, and enclosing these in plantations of young trees, giving up the avenue as a road, and masking both ends with young trees thickly planted, thus forming a new approach, as has been done in the place we are now describing.

These additions of young trees with the old answered the purpose pretty well on looking across

the line of the old avenue ; but from either end the ghost, as it has been called, of the old avenue was as conspicuous as ever ; and many years must elapse before the young would become associated with the old trees.

It is the difficulty of bringing trees which have been planted in line to agree with those planted irregularly which has condemned so many avenues to the axe ; and though it may be regretted that such fine specimens of oak and elm have been sacrificed to a change of taste, it must be admitted that park scenery in general has been improved by the abolition of avenues in private residences. At this place the demolition of the avenue is an evident improvement, for on proceeding along the new approach many interesting glades become open to the view on either hand. These are not narrow vistas, but wide spacious openings between the equally extensive masses of wood ; the whole has an air of grandeur as well from the amplitude of the features themselves as from the objects composing them. A very large herd of deer is kept, and these being seen in various groups scattered over the park, serve to enrich and give animation to the scenery.

Except immediately in front, the house and offices are embosomed among lofty trees. The building is Elizabethan Gothic ; consisting of a centre and two wings, having all the architectural enrichments of that picturesque style. The whole exterior, from the amplitude of the parts, has an imposing effect ; nor are the apartments within

less striking from their spaciousness, the massive grandeur of their fittings up, and ornamental finishings of the ceilings, cornices, and pannelled walls.

The domestic offices form a large square court behind the mansion, and still further in the rear we understood the gardens were originally laid out. But about fourscore years ago it became the fashion to dislike kitchen-gardens near a house; and in compliance with the reigning taste, the convenient old garden was demolished, and a new one formed in a valley nearly a mile distant; which was no sooner done than it was repented of by the owner, owing to the inconvenience of the intercourse with the garden. It was not alone the distance the gardens lay from the house that was complained of, but the greater liability of the new garden to be visited by night frosts in April and May; for though perfectly sheltered from wind, and on a rich spot of land, there is always more humidity in such situations, and consequently a lower temperature.

The surface of the park is a good deal diversified. There are no hills certainly; but there are a good many beautifully winding hollows of considerable depth, which being finely wooded on the sides, have a very ornamental effect when seen from the lower grounds. The woods, as their distance is increased from the house, assume the character of forest scenery, there being much under-growth of wild shrubs and self-sown young trees, forming together the most interesting and pic-

turesque groups. The closely-nibbled portions of verdant turf which flow among these groups and detached parts of the wood are as varied as possible, and ever forming the most pleasing associations. This is, indeed, just such woodland scenery as a painter would be delighted to study and depict. There is no mark of artificial regularity—no right lines—no circles or other regular figures; all is the effect of time and accident. Majestic trees are associated with some of their own stripling progeny, and those accompanied by tufts of blooming furze and broom. The intricate play of intervening turf, the various attitude of the trees, and the gradations of higher and lower thorns, holly and juniper springing from among the decayed and living ferns, form in all directions scenes which, when enlivened by the bounding deer, are worthy of the sketch-book of a Gainsborough.

Many writers of the most refined taste, and who have acquired that taste by the study of the principles of painting as exemplified in the works of the great masters, have long ago insisted that landscape gardeners should in all cases copy, as far as possible, the scenery (and sylvan scenery particularly) as it is represented by the old masters in their pictures; or, if not acquainted with the works of Rembrandt, Poussin, or Claude Lorraine, then they should repair to the New Forest in Hampshire, where the late ingenious Gilpin caught and matured so many of his fine ideas of forest scenery. For it is only in such localities that the

finest combinations of trees, shrubs, and herds are met with ; and which might be successfully imitated, not only in the greater features of a park, but in all dressed ground, and even in the flower-garden.

This advice, though very generally received as a theory, has met opposition not only from practical men, but from some professors of no mean repute. These last readily admit that the pictures of forest scenery are faithful to nature, and excellent as works of art ; and they willingly confess that real forest scenery presents many interesting associations. But they cannot admit that such accidental associations should be copied by the gardener ; because, say they, whatever is done by the latter is a creation of art, and as such should be acknowledged, and without attempting to conceal whatever has been done by design and “ by rule and line.”

A well-known professor declares that there is a style which landscape gardeners should only be called on to execute, and which he designates the *gardenesque* ; the rules of which are that there should be no indiscriminate mixture of trees, shrubs, and herbs, but rather that these descriptions should appear in groups, carefully blended into each other ; that variety should be given by introducing the greatest possible number of exotic plants, as a contrast to the native plants of the country ; and that the outline of every feature should be a repetition of some regular figure. Circles or ovals should mostly prevail, only differ-

ing from each other in size according to the purpose for which they are intended, their distance from the principal points of view, or to the declivity or acclivity of the surface on which they are placed.

This style differs from the modern notions of laying out flower-gardens, inasmuch as the first is composed of a variety of similar forms, the second is furnished with a variety of irregular forms or beds ; in the first the plants are grouped, in the second they are mixed indiscriminately. The first exhibits artistical gardening, the second is an attempt to imitate a natural disposition of plants, but which requires just as much designing and as much manual labour to execute as any regularly laid out garden whatever. So that in fact there is but very little difference in the execution ; and as to the effect on the eye of a spectator, neither will show any decided superiority of visual gratification, whether examined in detail, or viewed as a consistent whole.

Judicious grouping of trees and shrubs is a commendable tact of landscape gardening ; but unless it is executed according to the laws of nature, it may give offence rather than pleasure. Placing alpine plants in a valley and aquatics on higher ground is not only bad taste, but bad management. Some of the Continental landscape gardeners, in their imitations of the English style of park scenery, have carried the grouping of forest trees to too great a length. The effect is complained of ; because, for want of proper blending

to produce gradations from one to the other, there can be no harmony in such scenery. But notwithstanding the woodland we were then traversing is composed of the same kinds of trees, and the same kinds of undergrowths, there was an endless variety in their associations, causing an interesting display of light and shade. Some trees stand boldly prominent, with deep and shady recesses between; and all being the effects of mere accident, enhanced the value of those wild though pleasing features.

That a wood of great extent, dismembered as it were by green glades, and based in underwood, is much more interesting than an open grove of single trees standing on naked turf, is a truth allowed by every one. This seems to have been the opinion of almost all the old painters, who very seldom represented single trees, unaccompanied by shrubs or other undergrowths; and it justifies the opinion of those who advise the improvers of park scenery to repair to forests to take lessons.

But can the same style be applicable in the disposition of ornamental trees, shrubs, and herbaceous plants, in highly-dressed pleasure-grounds? Some of our best writers on the subject answer "Yes;" and it is an idea which has been very generally entertained; as most of the pleasure-grounds of this country are embellished by mixed groups of trees, shrubs, and herbs: even flower-gardens having been laid out in this style,

composed of an aggregation of plots and groups of various forms and sizes, upon a base of smooth turf.

This is called imitating nature in her most pleasing forms ; but these virgin forms of nature are pleasing chiefly because they are unaccompanied by every mark of art. And it is objected to such style of flower-gardens, that if nature be impaired by any interference of art, so no dispositions of art should be exhibited as imitations of nature.

This impression, whether right or wrong, begins to have its effect, as several flower-gardens on rather a large scale have been lately designed or actually laid out in this country in the Dutch or geometric style—a style, of all others the most rigidly artificial. It is probable, however, that except for flower-gardens on a few square yards of surface, it will never become generally fashionable.

Placing or arranging plants of the same species or genus near together, is truly and visibly artistical. In nature, they are for the most part intermixed, and for that very reason, it is said, they should be classed when brought into cultivation or employed as objects of ornament ; though for the continuous beauty of a flower-garden, this planting in masses is not always expedient. Many of the most showy herbaceous plants are seasonal, and visible only for a short time ; consequently blanks are ever occurring, which either remain unsightly or cause consider-

able labour to refurnish. The fact is, there is a happy medium in all things ; and the pleasure arising from a well-designed and well-kept garden flows directly from our feelings at the moment, rather than from any abstract notions we may entertain as to whether the scene before us be exactly in accordance with the rules of pure taste or not. No one would object to the violet or snowdrop peeping from beneath the rhododendron, nor the hollyhock shooting up from among the laurels ; but if we had seen either hollyhock or rhododendrons in the wild wood in which we were riding, they would have been condemned as unsociable intruders.

In designing gardenesque scenery, the grouping and variety of forest combinations may be imitated with propriety ; but it must be with very different kinds of plants : no rustic tree or shrub looks well if associated with cultivated exotics on dressed ground ; nor do the homely forms of old domesticated plants, as fruit-trees for instance, assimilate with ornamental plants.

Besides the forest scenery round the outskirts of this extensive park, it has many beautiful features, and a much greater variety than on our first entrance we were led to expect. At a considerable distance beyond the mansion we arrived at the top of a valley, which opening up away to the eastward, admits the view of a noble bend of the river. The brows of the valley, like the rest of the park, are clothed with magnificent oak ; and the open expanse of turf between keeps

up those ideas of ample grandeur which are the principal characteristic of the place.

Proceeding thence through woods of various character and aspect, we arrived on an elevated plain, on which were plainly discernible the traces of what had once been an entrenched camp, whether Roman or British is unknown ; but it is certainly of very ancient date, as some of the largest and apparently oldest oak trees grow on the crest of the mounds, as well as in the fosse. A little further, and on a knoll in view of the house is erected a lofty stone obelisk, on a square pedestal, inscribed to the memory of a member of the family, who fell at the head of his regiment in storming a fortress in Germany. Such monuments are suitable ornaments for a park, and especially when intended to immortalise the truly honourable, the worthy, and the brave.

Italian gardens were crowded with sculptured ornaments, and if well executed, so as to be admirable as specimens of art, these were agreeable and suitable accompaniments in groves of myrtle and orange trees, or to the softer forms of cypress and cedar. Some of these objects were very appropriate ; but before the fashion fell into disrepute, many most ridiculous things were executed, and many ludicrous figures or characters represented, by the statuary or the founder.

Notwithstanding Italian gardening, together with its molten or sculptured ornaments, has been long banished from this country, it is question-

able, perhaps, whether we have not gone too far in this work of extirpation. There is, certainly, a description of sculptured or architectural ornaments, like the one just alluded to, which is admissible, and particularly appropriate in park or garden scenery. Such places, confessedly dedicated to pleasure, should contain every object capable of yielding pleasurable emotions, whether arising from elegance of form, historical interest, or memorials of past events. And now that the most classical ornaments can be obtained at a very reasonable rate, it is to be expected that pleasure-grounds will once more be decorated with specimens of the sculptor's art.

Proceeding over the spacious park, we passed the keeper's lodge, which is replete with every convenience required for the performance of his various duties. As usual, there is a large farm and dairy establishment, called the "Grange," for the supply of the household, stud, &c., and the whole appears to be a perfect type of an ancient baronial residence.

In the foregoing pages we have given short descriptions of three country-seats of different characters; the types of one or other of them no doubt exist in every county of Great Britain and Ireland. These have been the fields of action for the landscape gardener, and offer examples of his taste and practical abilities. In some of those places the artist has been eminently successful, as well in his designs as in the execution, especially where the natural character was well defined,

and where the new features were judiciously adapted thereto; and particularly where the architect and the ground-improver were of the same opinion. For unless these two personages be governed by the same principles of taste, inconsistencies and incongruities must certainly be the result.

Many expensively-formed country-seats have been completely marred in consequence of the architect and gardener not having consulted together, or in consequence of their disagreement as to the arrangement of the buildings and their accompaniments. While the architect insists that he should be first consulted as to the aspect and situation of the house, and when that is fixed, then the gardener should be employed to add his embellishments. But to this the gardener demurs, because it might interfere with his line of approach, the place for the gardens, and the proper arrangement of the plantations. It is, therefore, best that they be consulted together before commencing operations.

The description of Fairfax Hall represents it as one of unmixed beauty, that is, such a composition of scenery as is considered by painters and connoisseurs of landscape as one of simple *beauty*, as distinguished from those scenes which are said to be *picturesque*. Here the rich though bland character of the principal building, the harmonious undulations of the general surface, the softly-varied effect of the woods, the smooth and verdant turf, the mild reflections from the

lake, all impress ideas of placid repose ; while at the same time the flocks and herds on the lawns banish that insipidity which so often accompanies purely beautiful scenes of equal extent. Nor is simple beauty the only characteristic of the place ; it is so intimately blended with utility, and with every comfort and convenience of a country residence, that a visitor must possess most fastidious ideas indeed who could survey such scenery and dispositions without unqualified admiration. It is true that some eyes require irritation ; a flickering scene of strong contrasts of forms and colours is more attractive than a quiet pastoral view ; but this is by no means a general feeling.

It is this style of scenery which landscape gardeners in general are most ambitious to create ; and if the genius of the place does not militate against such a style, it is quite right that it should be executed, because it gets rid of every mark of neglect, and imposes an appearance of dressy neatness which is sure to please every eye untainted by the affectation of the gallery.

But, as before observed, it is for this exclusive love of beauty and neatness that many landscape gardeners have been blamed ; not for the execution of it where called for, but for an indiscriminate application where improper. How many fine old castellated mansions, say their opponents, have been set out on a naked lawn ! How many rich masses of wood, which appeared to embrace and shelter the residence, have been anatomised for the sake of smoothness and a bedizened clear-

ance ! and how many necessary and legitimate accompaniments of a dwelling have been removed to a distance, merely because every window should, as much as possible, look out upon a piece of naked lawn !

All this is very true, and wherever such a style of improvement has been executed, it may have produced *baldness* rather than beauty ; and however right such a design might be for the embellishment of a place like Fairfax Hall, it would be improper, and perfectly inconsistent with the character of such a place as ——— Abbey ; for here the natural as well as the historical character of the place must be destroyed, before it can be transformed into a scene of unmixed beauty ; making the antique features of the abbey (as has been said on a similar association) appear like an aged matron dressed out with the most flaunting attire.

The notice we have taken of B——l Court shows it to be neither a place which can be called beautiful, nor, except the trees individually, is there any scene about it which can be called picturesque. As already said, its character is simple grandeur, an impression which arises from the amplitude of its features, the vast masses of full-grown wood, and the extensive expanse of lawn. It is a creation of ages, and is as likely to have been taken from an aboriginal forest, as that it has been at any former time planted by the hand of man, except the avenue before alluded to and its gardens. There is a dignity about it which a landscape gardener might very easily lessen, but not exalt. Nor can its character be imitated

except by the landscape gardeners of North and South America, or other untenanted countries.

Picturesque scenery exists in many parts of these kingdoms; and not only within parks, but even within the bounds of flower-gardens. On the management or disposition of such spots, the professional man may be called on for advice; and he cannot have a more pleasant task. Here he will find a painter's ideas of what forms, or will in due time form, fine pictures, of the greatest service to him; and, therefore, a knowledge of their works is a necessary part of his professional education; for he ought to aim at something higher than the simple exploits of levelling, smoothing, and tracing flowing or zig-zag lines, forming gravel-walks, and planting evergreen shrubs.

Besides the grand distinctions of scenery into the beautiful, the picturesque, and the sublime; to which may be added, the new distinction of gardenesque; all the objects composing those distinctions should partake of the same character. Thus, where we have beautiful buildings, animals, trees, mountains, lakes, and rivers, there should also be beautiful forms and colours.

Of beautiful buildings, a house or temple of Grecian architecture in its perfect state is said to be beautiful; and so is a building of any other, or of no architectural order, provided that its parts are duly proportioned; having suitable and useful ornaments, a smooth surface, and all of a bland, harmonious colour.

Among animals, saying nothing of the fair of the human race, the sleek and pampered charger, the silky-coated spaniel and greyhound, and the sprightly and elegant gazelle are all truly beautiful. Among birds, many are extremely beautiful, as well in form as in soft mildness of colour ; for instance, the cream-coloured dove and the encaged canary-finch ; not to mention scores of others belonging to the feathered race, as well as among fishes and even insects.

Among trees, the young ash and beech, the weeping-willow, and the deciduous cypress are eminently beautiful, owing to their light and airy shapes, the delicacy of their foliage, and the graceful position of their branches.

Of the greater features of the face of the earth, mountains or hills are most conspicuous ; and these are said to be lumpish or beautiful, according as they are more or less varied in outline : the first, in the practice of landscape gardening, are planted out of view, if possible ; the second are exposed to the windows, and admitted into every principal view or prospect from the walks or rides of a country-seat.

Almost all lakes are beautiful if their banks are undulating and finely fringed by trees and shrubs, and not too much choked up by water-plants, which gives the idea of fulness and impurity to the water, and moreover lessens the reflections which constitute the principal beauty of an expanse of water.

A lively river is one of the most beautiful fea-

tures of a country ; and when passing through a park, or if a reach of it can be seen from a terrace, or from the windows of a dwelling, it is a happy incident. The motion and glitter of running water give animation to every thing around.

Now, if the character of those beautiful things and incidents be changed, they will all become picturesque. If, instead of a Grecian temple, a Gothic cathedral were substituted, or a ruined Saxon or Norman castle ; instead of the pampered steed and silky-coated spaniel, view the old shaggy forest horse and Pomeranian dog ; in place of the finely-feathered spray of the deciduous cypress, substitute the gnarled and knotty oak ; instead of a gently-swelling verdant hill, look at a lofty range of granite cliffs ; or a deep lake or mountain current, margined with precipitous crags : all those counterparts will show what is called romantic or picturesque scenery.

There are some objects with their accompaniments which are pleasingly picturesque : for instance, an antique cottage with its mossy thatch, pointed gables, dormer windows, and its rustic porch and fence, embosomed amid aged trees, is admired by every eye of taste ; while buildings of a more substantial and respectable appearance are passed by unheeded.

Many country seats of late years have been built and completed in the picturesque style ; and where the natural features of the country have been suitable, with very great success. The bank

of a mountain-stream is almost always eligible for such a style. Here the stream flows, perhaps in a deep-worn rocky channel ; often falling over natural cascades. The banks, especially where high and precipitous, are usually covered with birch trees and underwood of various wild plants. And when plantations of alpine trees—pines and cedars, are added, with deciduous sorts in the lower grounds, and the gothic mansion surrounded with shrubbery and gardens, the whole becomes in the process of time a most interesting retreat.

When such scenery is extremely amplified, that is, when the cliffs are immense in bulk and awfully high, and the hollows profoundly deep ; when an impetuous river descends with a continuous roar, shaking the ground to a considerable distance around ; and when all is viewed from the point of a projecting precipice, and especially during a thunder-storm, then the whole scene is sublime.

The different styles of ornamenting private country-seats of different character, have been already alluded to ; but it is necessary to advert to those peculiar styles of planting or arrangement of trees which is considered most suitable for embellishing public buildings. These are either regal, ecclesiastical, collegiate, or charitable institutions.

Royal palaces, which are generally magnificent buildings, should have accompaniments to correspond—extensive lawns ; broad terrace walks ; wide-diverging right-lined glades, bounded on the sides with double or treble ranks of trees placed at equal distances, all of the same kind. The

angular spaces between the open glades should be thick groves, but without underwood. Regularity must prevail; for without regularity of disposition, and right lines, it is impossible to give that air or impression of grandeur which the accompaniments of a palace should always possess. The trees should be either elm, lime, or plantanes. The oak is too much of a rustic to be admitted here; the ash is late in leafing, and too soon deciduous; and the different sorts of pines and firs are too gloomy. No shrubs or flower-plots should have a place; as a variety of diminutive objects, whether beautiful or not, are sure to detract from that solemnity of effect which arises from the view of an ample expanse of lawn, divided by extensive ranks of lofty trees.

College gardens should be planted in a similar style as royal gardens, only on a smaller scale. Close avenues, rectangular lawns, and broad gravel walks for pedestrian exercise are the principal features. Flowers and shrubberies are inconsistent; because too attractive to the eye of study or contemplation. Lime-trees, from their formal outline, associate best with the regularity of the architecture.

Ecclesiastical buildings, whether public, as churches, or private as episcopal palaces, rectories, &c., are susceptible of suitable decoration by characteristic planting. A churchyard with its short avenues of yew, or cypress, or cedars, or even with limes, render less dreary that bourne—

“From whence no traveller returns.”

The leading character of an episcopal palace is seclusion ; and, therefore, should be thickly surrounded with trees of a sombre tint ; including dark shady avenues of pines, yew, holly, and cedars, all conducive to solemn thought and serious meditation.

Hospitals, almshouses, and other charitable institutions, are usually surrounded with ranks of shady trees, gravel walks, and turf ; and here, for the amusement of the feeble or ailing inmates, borders of flowers and flowering shrubs are introduced, with the kindest intention and with the best effect.

The last description of residence, and which owes half its beauty and comfort to characteristic planting, is the suburban villa. This is usually a spot of an acre or two by the side of a leading road or sequestered lane, of easy access. The house, with its cheerful inviting front, is set back from the front paled, or iron-palisaded fence, to allow of a carriage sweep of gravel, and a portion of dressed ground for flowers and shrubs. The offices are at one end ; and immediately behind the house there is another piece of dressed ground or a flower-garden fringed with shrubbery. Still farther back is the kitchen-garden ; and beyond this there is a piece of pasture, either for a cow or horse, or both. In some instances, in order to have a longer *home-walk*, a strip of ground is hedged off from the pasture, and dotted with shrubs on each side of a three-foot-wide gravel walk. And when a few forest trees are

planted in different parts of the pasture, the place is complete.

The labours which the landscape gardener has to superintend are trenching, ploughing, or digging ; planting ; road and walk making ; cutting and relaying turf ; laying down land into permanent grass ; forming ponds or reforming the course of brooks or rivers ; removing earth ; draining ; well-digging ; together with every branch of hydraulics which may be useful for the convenience or embellishment of a country-residence.

Trenching.—This is the preliminary and absolutely necessary preparation for all land intended to be planted, whether in forming shrubberies in pleasure-grounds, or for screens or masses of wood in a park. Whatever the subsoil may be, making it change places with the surface stratum, is a certain benefit to the trees. It facilitates the labour of putting in the plants, and renders the ground more receptive of all atmospheric influences, except drought, which never penetrates so deeply into an open porous soil, as it does into that which is firm. It also makes draining (if draining be necessary) more effectual by disturbing the subsoil, and in this respect is a favourable circumstance for the roots of trees.

In deep free soils, digging may be sufficient for the preparation of the ground ; and when an arable surface is to be planted, a good deep ploughing (or, what is better, thrice ploughed before planting) may suffice.

Where a group of trees are wanted for immediate effect in the near neighbourhood of a residence, or on a particular part of a park, the ground should not only be deeply trenched, but liberally manured, for expediting the growth of the plants ; and this extra expense is well repaid by the subsequent rapidity with which the trees mount up and answer the purpose for which they are planted. Sometimes, planting is performed by digging pits for each plant, without disturbing the general surface ; but this mode is only adopted on large tracts of ground which would be too expensive to trench, and inaccessible to the plough, but is not to be recommended except when better methods are impracticable.

Roads.—The formation of approaches is one of the principal tacts of the landscape gardener. He has to fix the direction and order the formation. Where gravel abounds, it is an easy affair. A trench is first made of the desired width, say from seven to fifteen feet ; and about one foot deep. A stratum of the coarsest stones or metal is laid in the bottom, and the surface is formed with the finest of the gravel. The whole body of the hard materials should be rammed down ; the thickness of which will vary, according as the natural bottom is hard or soft. The surface when finished should lie a little rounded ; but it should not be level longitudinally ; because this would make it too retentive of rain-water ; to avoid this, the surface lengthways should have imperceptible risings and fallings with side grips or

drains at the lowest places to carry off the water. The crown of the road should not be so high as to be seen from a distance on looking across it ; and if in passing through a hollow, it forms an obstacle to the flow of water from higher ground, an under cross drain may be required to prevent stagnation of rain or melted snow against the upper side of the road.

Gravel-walks in gardens are formed in a similar manner, but with gravel of a uniform character ; because when turned, stuff of an inferior quality may not be brought uppermost. The bed for a garden walk should be made in the natural soil, and need not be more than six or eight inches deep ; this will hold a body of gravel which when well trodden, levelled, and rolled, will form a perfectly dry and pleasant walk.

Cutting Turf.—This is done with two tools, namely, a racer and a turfing-iron. The first is made by fixing about six inches in length of the point of an old scythe, in a stick four feet long, cloven at the lower end to admit the piece of scythe, kept in place by a rivet which passes through the iron and both cheeks of the stick. The latter is bent at the lower end, in order that it may be pushed easily along the turf, while the iron point cuts to the depth required. By this simple tool the turves are cut one foot wide, and three feet long ; they are then severed from the ground by a thin crescent-shaped spade, the stem of which has two knees in its length between the cutting part and the wooden handle, which is like

that of a common spade. The angles of the stem allow the man to stand nearly upright, while the edge is moved horizontally. Each turf is rolled up, grass inwards, for carriage.

The turf is relaid on a smoothly raked surface, and levelled with a beater or roller. When turf verges are required to be laid, the turves are cut to the proper width and relaid by line.

But it often happens that turves are not to be had in sufficient quantity, in which case the ground must be stocked with seeds. For this purpose, the ground should be perfectly cleared of weeds; particularly perennial root weeds, as docks, dandelion, and couch; and when raked level it is sown pretty thickly with a mixture of Sweet-scented vernal grass; perennial Ray-grass; narrow-leaved Meadow-grass; Meadow cat's-tail; and Meadow fescue-grass. These dwarf sorts of grass, and a sprinkling of Yarrow and Dutch clover mixed therewith, will soon form a thick turf, if frequently skimmed over with the scythe to prevent them running to seed; which should never be seen on pleasure-ground turf.

Ponds.—The practicability of forming ponds or altering the course of rivers depends entirely on the nature of the subsoil. If this be alluvial, or impervious to water, the surface only needs to be excavated to the depth and extent required before the water is let in. Such works are never thought of except where there is a rill to supply, and to take off the surplus. In places where the subsoil is gravel, sand, or other porous soil, pond or lake-

making is a difficult affair ; because the whole bottom must have a thick coat of puddle deposited before it can be water-tight. Such feats, however, have been performed with the best effects, as at once adding to the value, as well as to the beauty of the place.

Removing Earth.—This is frequently required in improving landscape. A ridge of the surface may intercept a beautiful view ; or may prevent the formation of an easy road, or convenient walk ; in such cases, removing the obstacle is the best remedy. The earth so removed, either by cart or barrows, may be disposed of either on the surface around, or to form a new feature or mound to be planted.

Draining.—This is a subject which should be well understood by the landscape gardener. It is the very first of all rural improvements ; but it is impossible to drain well, unless the operator is well acquainted with the geology of the place ; that is, of what description the different strata of earth are which form the surface. The surface is wet from several causes—from land-springs which issue from higher ground ; from hollows whence there is no outlet ; from a retentive surface strata through which rain cannot sink ; or land may be wet from there being a body of water stagnant on a higher level, whence issues are constantly oozing over the lower surface.

Whichever of these causes be in operation the drainer must be guided accordingly. He must first find the source of the annoyance ; and next

see where it may be carried. These two points are often very near together; in springy land the surface often consists of alternate layers of sand and clay, or beds of gravel and clay: water is retained by the one, and flows along the other; and when these *cross out* on a declivous surface, springs issue from each bed of gravel and flow over the clay, and sink again into the gravel, but no deeper than the next bed of clay, at the edge of which the water again appears on the surface. Such land can only be laid dry by deep open ditches at the sides, and diagonal underground drains filled with stones or rough screened gravel, leading to the lowest side. Where light loamy or sandy soil is wet, in consequence of it reposing on subsoil of clay—if the latter be cut through by digging, or even perforated by an iron dibber in Elkington's manner, the water will be carried away downwards. If a pond fed by springs discharges its surplus water over land which would be otherwise dry, a line of draining tiles laid from the pond to the lowest ditch would prevent the flow of water over the intermediate surface.

In short, there are many ways of getting rid of surface water, provided there is first obtained a certain knowledge of the cause; and provided there is an approachable outlet. On the chalk formation a *negative Artesian well* may be sunk, that if drains be led to it, will swallow all the surface water of a farm.

The means of obtaining a constant supply of water to a house and its offices deserves the best

consideration of the improver, in order to get rid of the slavish labour of pumping. Sometimes water may be led to every room of a house if a source be found sufficiently high ; in which case, a line of pipes is only requisite. An Artesian well may be formed on a neighbouring hill to effect this great convenience ; or, if this be impracticable, such a well may be formed in a dry valley, from which water for the house may be raised by machinery. We have seen highly ornamental horizontal windmills erected for such purposes, and which were most effectual ; serving not only the house and offices, but a large extent of gardens also, the water being drawn from a common well. This, as well as drainage, may be considered more within the province of the architect, than the landscape gardener ; but both should consider these matters before the place of a house is determined on.

THE END.

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